



~~THE ROYAL CANADIAN INSTITUTE~~



YOUNG PYGMY HIPPOPOTAMUS

The second specimen born in the Zoological Park of this very rare and wonderful animal, and it is the first record in captivity. The photograph was made thirty-one days after birth. Photograph by Elwin R. Sanborn.

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TWENTY-FIFTH ANNUAL REPORT
OF THE
NEW YORK
ZOOLOGICAL SOCIETY

CHARTERED IN 1895

OBJECTS OF THE SOCIETY
A PUBLIC ZOOLOGICAL PARK
THE PRESERVATION OF OUR NATIVE ANIMALS
THE PROMOTION OF ZOOLOGY

1920



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 *LYDIG, DAVID,
 LYDIG, CAPT. PHILIP M.,
 McALPIN, CHARLES WILLISTON,
 McCOMB, J. SCOTT,
 McKEEVER, I. C.,
 *McKIM, CHARLES F.,
 McKINNEY, GLENN FORD,
 McLANE, GUY RICHARDS,
 McMILLIN, MARION,
 *MACKAY, DONALD,
 MACY, V. EVERIT,
 MADEIRA, PERCY C.,
 *MAITLAND, ALEXANDER,
 MALLORY, CHARLES H.,
 *MARC, THEOPHILUS M.,
 *MARKOE, DR. FRANCIS H.,
 MARLING, ALFRED E.,
 MARSHALL, LOUIS,
 MAXWELL, ROBERT,
 MERKEL, HERMANN W.,
 METZ, HERMAN A.,
 MILBANK, DUNLEVY,
 MILBANK, JEREMIAH,
 MILLER, DR. GEORGE N.,
 MILLS, OGDEN L.,
 MILTON, MRS. WM. F.,
 MITCHELL, A. M. POST,
 MITCHELL, FRANCIS L.,

*DECEASED

- MITCHELL, H. R.,
MITCHELL, MASON,
*MITCHELL, ROLAND G.,
MONELL, AMBROSE,
*MOORE, MRS. JAMES AMORY,
MOORE, FREDERIC P.,
MORAN, DANIEL E.,
MORGAN, J. P.,
MORGAN, MRS. J. P., JR.,
MORRIS, DR. LEWIS RUTHERFURD,
*MORRIS, JAMES,
MOWBRAY, L. L.,
NELSON, ROBERT,
NEWBOLD, THOMAS,
NEWLAND, V. M.,
NICHOLS, MRS. WILLIAM GILMAN,
NILES, J. BARRON,
NILES, MISS FLORILLA,
NILES, WILLIAM WHITE,
NILES, MRS. WILLIAM WHITE,
NORTON, JOHN W.,
NUNAN, J. J.,
NYE, JOSEPH K.,
OSBORN, MRS. HENRY FAIRFIELD,
OSBORN, MRS. WILLIAM CHURCH,
OSBURN, DR. RAYMOND C.,
PAINTER, KENYON V.,
*PARISH, HENRY,
PARRISH, JAMES C.,
PARSONS, H. DE B.,
PEABODY, CHARLES A.,
PERKINS, WILLIAM H.,
PETERS, MRS. THEODORE,
PETERS, SAMUEL T.,
PHELPS, CAPT. JOHN J.,
PHILLIPS, DR. JOHN C.,
PHILLIPS, JOHN M.,
PHIPPS, HENRY,
PHIPPS, HENRY C.,
PHOENIX, LLOYD,
PHOENIX, PHILLIPS,
PIERCE, HENRY CLAY,
PIERREPONT, JOHN J.,
PIERREPONT, ROBERT L.,
PIERREPONT, SETH LOW,
*PINCHOT, J. W.,
*PORTER, CLARENCE,
*POTTER, MRS. HENRY C.,
POTTER, WILSON,
PRATT, DALLAS B.,
PRATT, HAROLD I.,
PROCTER, A. PHIMISTER,
PULITZER, RALPH,
PYNE, M. TAYLOR,
*QUINTARD, GEORGE W.,
RAYMOND, CHARLES H.,
RICE, HAMILTON,
RICE, MRS. HAMILTON,
RIKER, SAMUEL, JR.,
*ROBB, J. HAMPDEN,
*ROBBINS, MILTON,
ROBINSON, ARTHUR,
ROGERS, ARCHIBALD,
RUCKER, WILLIAM J.,
RUNGIUS, CARL,
*RUSS, EDWARD,
RUTHERFURD, WINTHROP,
*ST. JOHN, FRANK L.,
SALTUS, J. SANFORD,
SAMPSON, HENRY,
SANBORN, ELWIN R.,
*SANDS, WILLIAM R.,
SANFORD, HENRY,
SANFORD, HENRY, JR.,
SANFORD, SAMUEL S.,
*SANGER, FAIRFIELD OSBORN,
SATTERLEE, MISS MABEL M.,
*SCHIERMERHORN, J. EGDMONT,
*SCHIEFFELIN, EUGENE,
SCHIEFFELIN, SCHUYLER,
SCHILEY, EVANDER B.,
SCHWARZENBACH, ROBERT J. F.,
SETON, ERNEST THOMPSON,
SHELDON, CHARLES,
SHERMAN, GEORGE,
*SHERMAN, WILLIAM WATTS,
SHEWAN, JAMES,
SHEARSON, EDWARD,
SHIELDS, GEORGE O.,
SLATER, H. N.,
SLOAN, BENSON B.,
*SLOAN, JOHN,
SLOAN, MALCOLM D.,
*SLOAN, SAMUEL,
SLOAN, SAMUEL,
SMITH, JAMES A.,
SOHER, LE ROY,
SPEYER, JAMES,
SQUIER, STUART C.,
STETSON, FRANCIS LYNDE,
STEWART, WM. R., JR.,
STOKES, MISS OLIVIA E. PHELPS,
STRAIGHT, MRS. WILLARD,
STREETER, D. D.,
*STURGES, FREDERICK,
STURGES, FREDERICK, JR.,
TARLTON, LESLIE JEFFERIS,
*THALMAN, ERNST,
THAYER, MRS. ETHEL RANDOLPH,
THOMPSON, LEWIS S.,
THORND, FRANK,
THOMPSON, WILLIAM P.,
TOD, ROBERT E.,
TODD, WILLIAM R.,
TOWNSEND, DR. CHARLES H.,

*DECEASED

TREVOR, HENRY G.,
TREVOR, JOHN B.,
TRITTON, CLAUDE H.,
TUCK, EDWARD,
UHLIMANN, FREDERICK,
VAIL, THEO. N.,
VAN NORDEN, MRS. GRACE T.,
VAN RENSSELAER, CHARLES A.,
*VANDERBILT, ALFRED G.,
VARNUM, MRS. JAMES M.,
*WADSWORTH, MAJOR W. AUSTIN,
WADSWORTH, MRS. W. A.,
WAID, D. EVERETT,
WAINWRIGHT, RICHARD T.,
*WALKER, DR. HENRY FREEMAN,
WANAMAKER, RODMAN,
WARBURG, FELIX M.,
*WARREN, SAMUEL D.,
*WATSON, FRANCIS A.,
WATSON, JAMES S.,
WEBB, DR. W. SEWARD,
*WELCHER, MRS. FANNY AVERY,
*WENDELL, EVERT JANSEN,

WORTHINGTON, C. C.,

*WETMORE, CHARLES W.,
WETMORE, GEORGE PEABODY,
WHARTON, WILLIAM P.,
WHEALTON, LOUIS N.,
WHITE, EDWARD,
WHITE, JOHN JAY, JR.,
*WHITEHEAD, PAUL,
WHITMAN, MALCOLM D.,
WHITNEY, CASPAR,
WHITNEY, CORNELIUS VANDERBILT
WHITNEY, HARRY PAYNE,
WHITNEY, PAYNE,
WILLETS, ELMORE A.,
WILLETS, HOWARD,
WILLIAMS, CLARK,
WING, JOHN MORGAN,
*WING, JOHN D.,
WINTHIROP, BECKMAN,
*WINTHIROP, EGERTON L.,
*WITHIERS, GEORGE B.,
WOERISHOFFER, MRS. ANNA,
WOOD, DR. CASEY A.,
WOODWARD, WILLIAM,

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HOE, MRS. RICHARD M.,
HOE, RICHARD M.,

HYDE, MRS. CLARENCE,
MORGAN, J. P.,
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STEWART, LISPENARD,
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WILSON, PROF. EDMUND B.,

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ADAMS, FREDERICK B.,
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ADAMS, JOHN DUNBAR,
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ALLEN, FREDERIC WINTHIROP,
ALLIEN, FREDERICK,
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ANDERSON, P. CHAUNCEY,
ANDREINI, J. M.,
ANDREWS, COL. JAMES N.,
ANDREWS, GWYNNE M.,
ANSBACHER, A. B.,
ANSBACHER, D. A.,
APPLETON, FRANCIS R.,
APPLETON, JAMES W.,
ARCHIBOLD, JOHN F.,

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ARCHIBOLD, MRS. J. F.,
 ARCHIBALD, JAMES F.,
 ARCHER, MRS. GEORGE A.,
 AREND, F. J.,
 ARKUSH, REUBEN,
 ARMOUR, GEORGE A.,
 ARMOUR, MRS. HERMAN O.,
 ARNOLD, MRS. GLOVER C.,
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 ASHMUN, BERNARD I.,
 ASPINWALL, J. LAWRENCE,
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 ATWATER, RICHARD M., JR.,
 ATWOOD, KIMBALL C.,
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 AUCHINCLOSS, MRS. EDGAR S., JR.,
 AUCHINCLOSS, MRS. EDGAR S., SR.,
 AUCHINCLOSS, HUGH,
 AUCHINCLOSS, JOHN W.,
 AUERBACH, MRS. JOSEPH S.,
 AYCRIGG, B. ARTHUR,
 AYMAR, MRS. JOSE,
 BACHE, JULES S.,
 BACON, GEORGE W.,
 BACON, WENTWORTH C.,
 BACON, MRS. ROBERT,
 BAGG, DR. CLINTON, L.,
 BAINSEN, C.,
 BAILEY, MRS. JAMES M.,
 BAKER, MRS. ELIZABETH R. W.,
 BAKER, STEPHEN,
 BAKER, WM. F.,
 BALDWIN, ALBERT H.,
 BALDWIN, FREDERICK H.,
 BALDWIN, HENRY DEFORREST,
 BALDWIN, JARED G., JR.,
 BALLANTINE, ARTHUR A.,
 BALLARD, EDWARD L.,
 BALLARD, SUMNER,
 BAMBACH, CHRISTIAN,
 *BANGS, FRANCIS S.,
 BANKS, THEODORE H.,
 BANNARD, OTTO T.,
 BARBER, THOMAS H.,
 BARBEY, HENRY G.,
 BARCLAY, MRS. JAMES L.,
 BARCLAY, MRS. REGINALD,
 BARKER, LOUIS H.,
 BARLOW, PETER TOWNSEND,
 BARNARD, J. AUGUSTUS,
 BARNES, CORTLANDT D.,
 BARNES, EDWARD W.,
 BARNES, HENRY B.,
 BARNES, JAMES,
 BARNEY, A. L.,
 BARNEY, ASHBELL H.,
 BARNEY, EDGAR S.,

BARNEY, MRS. J. STEWART,
 BARNUM, WILLIAM M.,
 BARRON, GEORGE D.,
 BARTLETT, PHILIP G.,
 BARTOL, HENRY G.,
 BARTON, EDWARD RITTENHOUSE,
 BASKERVILLE, MRS. JESSIE,
 BATES, DR. W. H.,
 BATTERSON, JAMES G.,
 BAUCHE, THOMAS H., JR.,
 BAUER, EDGAR MAYHEW,
 BAUER, OSWALD A.,
 PAUER, R. M.,
 BAUER, WALTER,
 BAYARD, LOUIS P.,
 BAYHA, EDWIN,
 BAYLIES, EDMUND L.,
 BAYNE, MRS. L. P.,
 BEACH, WILLIAM N.,
 BEADLESTON, MISS EDITH,
 BEALE, PHELAN,
 BEALL, JEREMIAH,
 BEEBE, CHARLES,
 BEEBE, WALTER H.,
 BEERS, MRS. E. LEGRAND,
 BEHR, ROBERT,
 BELL, LOUIS V.,
 BELL, PARK E.,
 BELLER, A.,
 BELLER, WILLIAM F.,
 BEND, MRS. GEORGE,
 *BENEDICT, JAMES H.,
 BENEDICT, LEMUEL C.,
 BENIS, H.,
 BENJAMIN, GEORGE POWELL,
 BENJAMIN, M. W.,
 BENJAMIN, WILLIAM M.,
 BENKARD, HARRY H.,
 BENKARD, J. PHILIP,
 BENKARD, MRS. HARRY H.,
 BENSON, R. LAWRENCE,
 BERGH, HENRY,
 BERENS, DR. T. PASSMORE,
 BERESFORD, JOHN GEORGE,
 BERNARD, PIERRE ARNOLD,
 BERNHEIM, GEORGE B.,
 BERNHEIM, HENRY J.,
 BERNHEIMER, CHARLES L.,
 BEROLZHEIMER, F.,
 BERTON, S. R.,
 BETHELL, F. H.,
 BIDDLE, WILLIAM C.,
 BIER, MRS. SYLVAN,
 BIGELOW, WILLIAM S.,
 BIGGS, MRS. HERMANN, M.,
 BIJUR, ABRAHAM,
 BILLINGS, C. K. G.,
 BILLINGS, MISS MARGARET S.

*DECEASED

BIRCHALL, MRS. WM. H.,
 BLACK, MRS. ROBERT C.,
 BLADGEN, MRS. GEORGE,
 BLADGEN, GEORGE,
 BLADGEN, MRS. JULIA G.,
 BLAIR, CHAS. H.,
 BLAIR, J. INSLEY,
 BLAIR, MRS. LEDYARD,
 BLAKESLEE, MRS. THERON J.,
 BLISS, MRS. WALTER PHELPS,
 BLISS, MISS A.,
 BLISS, MISS S. D.,
 BLOODGOOD, ROBERT F.,
 BLOOMINGDALE, IRVING D.,
 BLOOMINGDALE, IRVING L.,
 BLOOMINGDALE, MRS. JOSEPH B.,
 BLUMENTHAL, HUGO,
 BLUNDELL, E. F.,
 BOARDMAN, MISS R. C.,
 BOESE, QUINCY WARD,
 BOETTGER, MISS PAULINE,
 BOETTGER, THEODORE,
 BOISSEVAIN, G. L.,
 BOLTON, MISS ELLA F.,
 BOLTON, WILLIAM H.,
 BOND, HENRY R., JR.,
 BOND, STEPHEN N.,
 BONNER, G. T.,
 BOOTH, MRS. AUGUSTA,
 BOOTH, A. E.,
 BOOTH, ENOS S.,
 BORIE, A. E.,
 BORLAND, J. NELSON,
 BORLAND, WILLIAM G.,
 BOULTON, WILLIAM B.,
 BOWDOIN, MISS EDITH G.,
 BOWDOIN, GEORGE TEMPLE,
 BOWEN, CLARENCE WINTHROP,
 BOWEN, JAMES,
 BOWNE, FRANCIS DRAPER,
 BOYDEN, DWIGHT F.,
 BRADLEY, ALLAN B. A.,
 BRADLEY, MISS MARY T.,
 BRADY, NICHOLAS F.,
 BRAND, OSCAR J.,
 BREMER, AUGUST F.,
 BRENGLE, LAWRENCE J.,
 BREWSTER, MRS. BENJAMIN,
 BREWSTER, GEORGE S.,
 BRIDGES, ROBERT,
 BRIGGS, JAMES E.,
 BRINCKERHOFF, ALEX. G.,
 BRISTOL, JOHN I. D.,
 BRISTOW, WILLIAM B.,
 BRODMERKEL, CHARLES, JR.,
 BROKAW, CLIFFORD V.,
 BROKAW, MRS. CLIFFORD V.,
 BRONSON, DR. EDWARD BENNET,

BROOKS, MISS BERTHA,
 BROOKS, FREDERICK,
 BROOKS, J. ARTHUR,
 BROUGHTON, MRS. U. H.,
 BROWER, GEORGE V.,
 BROWN, MRS. CHARLES STELLE,
 BROWN, CHARLES F.,
 BROWN, CHAS. HILTON,
 BROWN, DICKSON Q.,
 BROWN, EDWIN H.,
 BROWN, COL. FRANKLIN Q.,
 BROWN, MRS. FRANKLIN Q.,
 BROWN, HENRY C.,
 BROWN, JOHN BARKER,
 *BROWN, RICHARD E.,
 *BROWN, STEPHEN P.,
 BROWN, MRS. THOMAS E.,
 BROWN, VERNON CARLETON,
 BROWNING, WILLIAM H.,
 BROWNING, J. A.,
 BRUNDIGE, MISS ELIZABETH B.,
 BRUNSWICK, MRS. EMANUEL,
 BRYCE, MISS MARY T.,
 BRYSON, T. B.,
 BUCKMAN, CLIFFORD,
 BUCKNER, MORTIMER NORTON,
 BUCKNER, THOMAS A.,
 BUDD, HENRY A.,
 BUECHNER, C. FRED,
 BULKLEY, EDWIN M.,
 BULKLEY, MRS. EDWIN M.,
 BULKLEY, JONATHAN,
 BULKLEY, L. DUNCAN,
 BULKEY, Q.,
 BULL, J. EDGAR,
 BURDEN, JAMES A., JR.,
 BURDEN, MRS. W. A. M.,
 BURLEIGH, MRS. GEORGE W.,
 BURLINGHAM, CHAS. C.,
 BURNHAM, MRS. WM. A.,
 BURRILL, EDWARD L.,
 BURROWS, WILSON A.,
 BUSK, FRED T.,
 BUTLER, ARTHUR W.,
 BUTLER, CHARLES STEWART,
 BUTLER, MISS VIRGINIA,
 BYRNE, MRS. JAMES,
 CABOT, F. H.,
 CAESAR, HENRY A.,
 CAHEN, JAMES P.,
 CAHEN, JULIUS P.,
 CAHN, ARTHUR L.,
 CALKET, J. HAMILTON,
 CALLENDER, WALTER R.,
 CALMAN, HENRY L.,
 CAMMANN, EDWARD C.,
 CAMMANN, HENRY LORILLARD,
 CAMMANN, HERMAN H.,

*DECEASED

CAMP, EDWARD B.,
 CAMPBELL, DONALD,
 CANDEE, HOWARD S.,
 CANFIELD, GEORGE FOLGER,
 CANROBERT, A. H.,
 CAPLIN, HARRY,
 CAREY, FREDERICK F.,
 CARLBACH, EMIL,
 CARLTON, NEWCOMB,
 CARNEGIE, MRS. GEORGE T.,
 CARPENTER, WILLIAM,
 CARPENTER, C. L.,
 CARSON, MRS. J. HENRY,
 CARTER, DR. HERBERT S.,
 CARTIER, P. C.,
 CARY, MRS. CLARENCE,
 CASE, HENRY P.,
 CASE, J. HERBERT,
 CASS, CHARLES ANDERSON,
 CATHCART, MISS JENNIE R.,
 CATTS, ROBERT M.,
 CERIO, MRS. GEORGE,
 CHALMERS, ARTHUR A.,
 CHAMBERLAIN, WILLIAM B.,
 CHAMBERS, FRANK R.,
 CHAMBERS, HILARY R.,
 CHAMBERS, MISS KATHERINE,
 CHAMPOLLION, MRS. ANDRE C.,
 CHANLER, ROBERT W.,
 CHAPIN, MISS MARIA BOWEN,
 CHAPMAN, MISS FANNY,
 CHAPMAN, HENRY OTIS,
 CHAPMAN, JOHN JAY,
 CHARLES, HOWARD W.,
 CHAVES, JOSE EDWARD,
 CHENEY, GEORGE L.,
 CHENEY, LOUIS R.,
 CHENEY, MRS. KNIGHT DEXTER, JR.,
 CHENEY, MISS MARY,
 CHILD, JOHN H.,
 CHILD, MRS. LEWIS P.,
 CHILDS, EVERSLEY,
 CHILDS, STARLING W.,
 CITISHOLM, MRS. HUGH J., SR.,
 CHOATE, JOSEPH K.,
 CHRISTIANCY, GEORGE A. C.,
 CHUBB, PERCY,
 CHURCH, AUSTIN,
 CHURCH, CHARLES T.,
 CHURCH, E. D., JR.,
 CHURCH, GEORGE H.,
 CHURCH, F. S.,
 CHURCH, LOUIS P.,
 CLAPLIN, JOHN,
 CLANCY, JOHN EVARTS,
 CLAPP, A. P.,
 CLARK, CHAS. HOPKINS,
 CLARK, C. M.,

CLARK, CHARLES MARTIN,
 CLARK, MRS. EDGAR MILTON,
 CLARK, EDWARD H.,
 CLARK, MRS. EDWARD HARDY,
 CLARK, MISS E. MABEL,
 CLARK, HAROLD B.,
 CLARK, HERBERT L.,
 CLARK, J. FRANCIS ALOYSIUS,
 CLARK, MRS. JOHN C.,
 CLARK, J. WILLIAM,
 CLARK, JOHN W.,
 CLARK, W. A.,
 CLARKE, E. A. S.,
 CLARKE, LEWIS L.,
 CLARKE, WILLIAM H.,
 *CLARKE, THOMAS SHIELDS,
 CLARKE, THOMAS B.,
 CLARKE, WILLIAM H.,
 CLARKSON, MISS ANNIE,
 CLAUSEN, GEORGE N.,
 CLEMENS, DR. JAMES B.,
 CLEWS, MRS. JAMES B.,
 CLOSE, WALTER H.,
 CLYDE, WILLIAM P.,
 COCHRAN, MRS. GIFFORD A.,
 COCHRAN, G. D.,
 COCHRANE, A. W. S.,
 COCKCROFT, MISS E. V.,
 COCKRAN, MRS. W. BOURKE,
 *COE, CHARLES A.,
 COFFIN, FRANCIS A.,
 COFFIN, WILLIAM EDWARD,
 COFFIN, MRS. STURGIS,
 COHEN, JAMES P.,
 COLBURN, ALBERT E.,
 COLBY, HOWARD A.,
 COLE, EDWARD F.,
 COLE, MRS. RUFUS,
 COLEBROOK, CHAS. B.,
 COLGATE, MISS CAROLIN B. D.,
 COLGATE, GILBERT,
 COLGATE, HENRY A.,
 COLKET, J. HAMILTON,
 COLLIER, MRS. R. J.,
 COLLINS, MAJOR ALFRED M.,
 COLLINS, CLARENCE LYMAN,
 COLT, HARRIS D.,
 COLT, RICHARD C.,
 COLTON, CHESTER LEE,
 CONBOY, MARTIN,
 CONKLIN, ROLAND R.,
 CONOVER, H. B.,
 COMSTOCK, MRS. H. G.,
 CONE, FREDERICK H.,
 CONHEIM, HERMANN,
 CONKLING, PAUL B.,
 CONNELL, HERBERT STANLEY,
 CONTENT, HARRY,

*DECEASED

CONVERSE, MISS MARY E.,
 CONWAY, MRS. MAUD ALLIS,
 CONYNGHAM, JOHN N.,
 COOK, MRS. CHARLES T.,
 COOMBE, T. GORTON,
 *COOPER, THEODORE,
 COOPER, MRS. M. LEBRUN,
 CORBETT, MRS. HENRY L.,
 CORBIN, AUSTIN,
 CORIELL, WILLIAM WALLACE,
 CORLIES, HOWARD,
 CORNELL, MISS EMILY LEFFERTS,
 CORNING, C. R.,
 COSTER, CHARLES HENRY,
 COSTER, MISS SYLVIA DE G.,
 COWDIN, WINTHIROP,
 CRABBE, MISS LOUISE G.,
 CRANDALL, EDWARD H.,
 CRANE, MRS. JONATHAN H.,
 CRAIG, DR. BURDETTE P.,
 CRAVATH, MRS. PAUL D.,
 CRAWFORD, ROBERT L.,
 CRAWFORD, WILLIAM,
 CRIMMINS, CYRIL,
 CRIMMINS, MISS MARY C.,
 CRIMMINS, THOMAS,
 CROCKER, GEORGE A., JR.,
 CROCKER, ROBERT S.,
 CROCKER, WILLIAM T.,
 CROMWELL, JAMES W.,
 CROMWELL, LINCOLN,
 CROSBY, MAUNSELL S.,
 CROSS, GEORGE D.,
 CROSS, W. REDMOND,
 CROSSLEY, G. REGINALD,
 CUNNINGHAM, W. DEL.,
 CURIEL, H.,
 CURREY, J. B.,
 CURTIS, F. K.,
 CURTIS, MRS. H. HOLBROOK,
 CUSHMAN, CHARLES V. B.,
 CUTTER, RALPH L.,
 CUTTING, R. FULTON,
 CUTTING, MRS. W. BAYARD,
 CUTTING, HEYWARD,
 CUYLER, MISS ELEANOR DE G.,
 DAILEY, GRANVILLE F.,
 DALLETT, FREDERIC A.,
 DALZIEL, MRS. F. Y.,
 DANA, PAUL,
 DARBY, DAVID M.,
 DAVENPORT, MRS. IRA,
 DAVIDGE, WILLIAM H.,
 DAVIES, MRS. FREDERICK M.,
 DAVIES, J. CLARENCE,
 DAVIES, JULIEN TAPPAN,
 *DAVIS, DAVID T.,
 DAVIS, GIERARDI,

DAVIS, HOWLAND,
 DAVIS, MORGAN,
 DAVIS, W. J.,
 DAVISON, CLARENCE B.,
 DAVISON, MISS ELLA H.,
 DAVISON, MISS ALICE M.,
 DAVISON, MRS. HENRY P.,
 DAY, MISS LAURA V.,
 DEANE, W. B.,
 DE CLAIRMONT, DR. A.,
 DE FOREST, HENRY W.,
 DEFORD, ROBERT W.,
 DEGENER, J. F.,
 DEGOICOURIA, A. V.,
 DE HEREDIA, MRS. CARLOS M.,
 DELAFIELD, EDWARD C.,
 DELAFIELD, FREDERICK P.,
 DELAFIELD, LEWIS L.,
 DELANO, EUGENE,
 DELANO, LYMAN,
 DELANO, WARREN,
 DELANO, MOREAU,
 DELANOY, WILLIAM C.,
 DELAUGIER-VILLARS, COUNTESS,
 DE LONG, MRS. GEORGE B.,
 DEMING, L. C.,
 DEPEW, MRS. CHAUNCEY M.,
 DERAHM, MRS. CHAS. JR.,
 DERHAM, MRS. H. CASIMIR,
 DERY, D. GEORGE,
 DESPARD, WALTER D.,
 DE TYNTO, IGNACIO,
 DEVEREUX, WALTER B.,
 DEVINNE, T. B.,
 DEYO, ROBERT E.,
 DEZALDO, FREDERICK,
 DICK, MRS. FAIRMAN ROGERS,
 DICKERSON, E. N.,
 DICKEY, MRS. CHARLES D.,
 DICKINSON, JOHN W.,
 DICKINSON, MRS. L. M.,
 DICKINSON, MRS. JOHN M.,
 DIEHL, GEORGE H., JR.,
 DIENST, A. P.,
 DIKE, OSCAR D.,
 DILLON, HERBERT LOWELL,
 DILLON, W. B.,
 DILWORTH, JOS. R.,
 DINSMORE, MRS. W. B.,
 DIXON, COURTLANDT P.,
 DIXON, THEODORE P.,
 DODGE, CLEVELAND E.,
 DODGE, FRANCIS P.,
 DODGE, MRS. ARTHUR M.,
 DODGE, MRS. ARTHUR N.,
 DODGE, MRS. CLEVELAND H.,
 DODGE, MRS. MARSHALL J.,
 DOHME, JOHN D.,

*DECEASED

DOMINICK, BAYARD,
 DOMINICK, GAYER G.,
 DOMINICK, H. BLANCHARD,
 DOMMERICH, OTTO L.,
 DONALD, MISS ANNA E.,
 DONALDSON, ROBERT M.,
 DOREMUS, F. S.,
 DOUBLEDAY, F. N.,
 DOUGLAS, E.,
 DOUGLAS, WALTER,
 DOUGLAS, WILLIAM H.,
 DOUGLASS, ALFRED,
 DOUGHERTY, MRS. PAUL,
 DOWD, JOSEPH,
 DOWD, MRS. JOSEPH,
 DOWD, WYLLYS E., JR.,
 DOWLING, EDWARD D.,
 DOWNER, J. HALSEY,
 DOWNEY, JOHN I.,
 DOWS, DAVID, SR.,
 DOWS, MRS. DAVID,
 DOWS, TRACY,
 DRAPER, ERNEST G.,
 DRAPER, DR. WILLIAM K.,
 DRAYTON, J. COLEMAN,
 DRAYTON, W. HEYWARD, 3RD.,
 DREXEL, MRS. JOHN R.,
 DROESCHER, S. R.,
 DRUMMOND, I. WYMAN,
 DUANE, RICHARD BACHE,
 DUBOIS, DR. EUGENE F.,
 DUBOIS, MRS. MATTHEW B.,
 DUER, MRS. DENNING,
 DUEL, DR. ARTHUR B.,
 DUER, MRS. JOHN BEVERLEY,
 DUNCAN, MRS. JOHN P.,
 DUNCAN, STUART,
 DUNCAN, MRS. STUART,
 DUNDAS, RALPH WURTS,
 DUNHAM, DR. CARROLL,
 DUNHAM, LEWIS L.,
 DURKEE, A. W.,
 DURKEE, RICHARD P. H.,
 DURKEE, MRS. R. P. H.,
 DURYEA, MRS. H. B.,
 DUTCHER, JOHN GEROW,
 DUVAL, MRS. HORACE C.,
 DWIGHT, JOHN E.,
 DWIGHT, MRS. WINTHROP,
 *DYER, MRS. E. TIFFANY,
 EAGLE, JOHN H.,
 EAMES, JOHN C.,
 EASTMAN, MISS ANNE K.,
 EASTON, CHARLES PHILIP,
 EATON, MRS. FREDERICK H.,
 EBEL, M. C.,
 EBERHART, CHARLES,

EBERMANN, MRS. ERNEST,
 ECK, WILLIAM J.,
 ECKART, EDMUND,
 EDGAR, HERMAN L. R.,
 EDGAR, MRS. NEWBOLD LEROY,
 EDGAR, MRS. J. CLIFTON,
 EDGAR, WILLIAM S.,
 EDMONDS, JOHN W.,
 EGERTON, MAURICE,
 EHRENREICH, ALFRED,
 EHRET, LOUIS J.,
 EHRMAN, MRS. ERNEST,
 EIDLITZ, ROBERT JAMES,
 EILERS, KARL,
 EINSTEIN, I. D.,
 ELDRIDGE, FREDERICK L.,
 ELDRIDGE, LEWIS A.,
 ELDRIDGE, WILLIAM T.,
 ELLIOTT, HOWARD,
 ELLSWORTH, MRS. J. W.,
 ELLSWORTH, JOHN S.,
 ELTING, DR. ARTHUR W.,
 EMANUEL, J. H., JR.,
 EMBURY, MRS. JAMES W.,
 EMERSON, MRS. WILLIAM,
 EMMERICH, WALTER,
 EMMET, MISS LYDIA F.,
 EMMET, ROBERT TEMPLE,
 ENDICOTT, ROBERT,
 ENO, MISS MARY PINCHOT,
 ERBSLOH, RUDOLPH,
 ERDMANN, MARTIN,
 ERDMANN, WILLIAM,
 ERLANGER, MILTON S.,
 ESBERG, HENRY,
 ETTLINGER, LOUIS,
 *ESTABROOK, ARTHUR F.,
 EUSTIS, JOHN E.,
 EVANS, S. M.,
 EVARTS, A. W.,
 EVARTS, MISS MARY,
 EVELAND, FRANK,
 EVERETT, A. L.,
 EWING, JOSEPH G.,
 EWING, MRS. THOMAS,
 EYER, GEORGE A.,
 FABBRI, ALESSANDRO,
 FABBRI, ERNESTO G.,
 FABBRI, MRS. ERNESTO G.,
 FABER, EBERHARD,
 FAHNESTOCK, DR. ERNEST,
 FAHNESTOCK, MRS. ERNEST,
 FAHNESTOCK, WILLIAM,
 FAIRCHILD, BENJAMIN L.,
 FAIRCHILD, MRS. C. S.,
 FAIRCHILD, SAMUEL W.,
 FALLS, MRS. DEWITT CLINTON,
 FARLEY, MRS. GUSTAVUS, JR.,

*DECEASED

FARLEY, COLVIN,
 FARNAM, WM. W.,
 FARNHAM, PAULING,
 FARQUHAR, PERCIVAL,
 FARR, MRS. A. M.,
 FARRELLY, T. CHARLES,
 FAY, FRANCIS B.,
 FECHTIG, DR. ST. GEORGE,
 FELDMAN, A. A.,
 FELDMAN, O. A.,
 FERGUSON, MISS ELIZABETH D.,
 FERGUSON, WILLIAM C.,
 FERRY, MANSFIELD,
 FEUSS, CAPT. ANDREW W.,
 FEUSTMAN, LEON P.,
 FIELD, MRS. AUGUSTUS B.,
 FINCH, EDWARD B.,
 FINCKE, MRS. REGINALD,
 FISCHER, WILLIAM,
 FISCHER, WILLIAM,
 FISCHER, WILLIAM H.,
 FISH, MRS. HAMILTON,
 FISHER, L. G.,
 FITZHUGH, JOHN L.,
 FLAGLER, HARRY HARKNESS,
 FLANNERY, MRS. JOSEPH A.,
 FLEISCHMANN, UDO M.,
 FLEITMANN, FREDERICK T.,
 FLEMING, HENRY S.,
 FLEMING, MATTHEW C.,
 FLETCHER, HENRY,
 FLOYD-JONES, EDWARD H.,
 FOHR, FRANZ,
 FOOT, SANDFORD DWIGHT,
 FORAN, GEORGE J.,
 FORD, MISS LESTA,
 FORDYCE, JOHN A.,
 FOSHAY, P. MAXWELL,
 FOSTER, MRS. BERTHA M.,
 FOSTER, EDWARD W.,
 FOSTER, GIRAUD,
 FOSTER, MACOMB G.,
 FOSTER, SCOTT,
 FOWLER, MRS. ANDERSON,
 FOWLER, CHARLES, JR.,
 FOX, MISS ALICE BLEECHER,
 FOX, HUGH F.,
 FRANK, EMIL,
 FRANK, LOUIS,
 FRANKO, NATHAN,
 FRASER, ALEX. J.,
 FRASER, ALEX. V.,
 FRASER, MRS. GEORGE C.,
 FRASER, MISS J. K.,
 FRASER, WM. A.,
 FRAZAR, E. W.,
 FREDERICK, MRS. LEOPOLD,
 FREEMAN, MISS GERTRUDE A.,

FRENCH, DANIEL C.,
 FRENCH, MRS. JOHN,
 FRIES, DR. HAROLD H.,
 FRISSELL, A. S.,
 FRITH, MISS LOUISE S.,
 FROST, AARON V.,
 FROTHINGHAM, JOHN W.,
 FROTHINGHAM, WM. I.,
 FRUEAUFF, FRANK W.,
 FULD, FELIX,
 FULLER, CHARLES D.,
 FULLER, MRS. EUGENE,
 FUNKE, EDMUND A.,
 GALLAND, NATHANAEAL K.,
 GALLARD, MRS. WM. O.,
 GALLARD, NATHANAEAL K.,
 GALLATIN, ALBERT,
 GALLATIN, MRS. ALBERT,
 GALLATIN, GOELET,
 GALLATIN, MRS. GOELET,
 GALLAWAY, MERRILL W.,
 GALLOWHUR, W. G.,
 GANSS, HERMAN O.,
 GARDNER, MRS. ALFRED,
 GARDINER, CHARLES B.,
 GARRETT, MISS LAURA B.,
 GARRETT, JOHN W.,
 GARRISON, MRS. J. H.,
 GARRETTSON, MISS HELEN JAY,
 GATES, MOODY B.,
 GAYLEY, MRS. GARDINER,
 GEDDES, DONALD G.,
 GARRARD, MISS MARGARET H.,
 GELSHENEN, WM. H.,
 GEORGE, G. K.,
 GERRY, PETER G.,
 GERRY, ROBERT L.,
 GERSTENDORFER, ALBERT,
 GIBB, MRS. H. E.,
 GILBERT, CLINTON,
 GILDERSLEEVE, HON. H. A.,
 GILLESPIE, ROBERT McM.,
 GILLIES, EDWIN J.,
 GILSEY, HENRY,
 GIOVANNETTI, ARTHURO,
 GLAZIER, HENRY S.,
 GLIDDEN, RALPH,
 GLYN, W. E.,
 GOADBY, W. H.,
 GODDARD, MRS. FREDERIC N.,
 GODFREY, MRS. E. D.,
 GODLEY, GEORGE McM.,
 GOELL, JACOB,
 GOLDMANN, JULIUS,
 GOLDSMITH, DR. ALFRED N.,
 GOLDWATER, HENRY,
 GOLDMAN, S. ORMOND,
 GOOD, REV. ROBERT,

GOODHUE, CHARLES E.,
 GOODWIN, GEORGE B.,
 GOODWIN, MRS. J. J.,
 GOODWIN, JAMES L.,
 GOODWIN, GRENVILLE,
 GOODWIN, H. SAGE,
 GOODWIN, JOHN B. L.,
 GOODWIN, WALTER L.,
 GOODWIN, WALTER L., JR.,
 GORDON, MISS CLARA J.,
 GROSVENOR, MISS ROSA ANNE,
 GOTTHELF, CHARLES,
 *GOTTHELF, HERMAN,
 GOTTHOLD, ARTHUR F.,
 GOTTHOLD, FREDERIC,
 GOULD, CHARLES A.,
 GOULD, CHARLES W.,
 GOULD, EDWIN,
 GOULD, MRS. EDWIN,
 GRAF, WILLIAM,
 GRAMAM, MRS. GEORGE S.,
 GRANT, MRS. DE FOREST,
 GRAVES, GEORGE COE,
 GRAVES, HENRY, JR.,
 GRAVES, J. P.,
 GRAY, HENRY G.,
 GRAY, MRS. H. WINTHIROP,
 GREENOUGH, JOHN,
 GREENOUGH, MRS. JOHN,
 GREENWOOD, MISS ELIZA R.,
 GREENWOOD, JOSEPH R.,
 GREER, CHARLES,
 GREER, MRS. LOUIS MORRIS,
 GRIEB, WILLIAM G.,
 GRIFFITH, MISS MARGARETTE E.,
 GRIFFITH, MISS SUSAN D.,
 GRIGG, HARRY K.,
 GRINNELL, E. MORGAN,
 GRISCOM, CLEMENT A., JR.,
 GRISWOLD, MRS. F. GRAY,
 GRISWOLD, W. E. S.,
 GRISWOLD, WM. E.,
 GROSS, JAMES S.,
 GRUNDNER, M.,
 GRUNER, WM. C.,
 GUGGENHEIM, HARRY F.,
 GUGGENHEIM, SIMON,
 GUGGENHEIMER, MRS. ELIZA,
 GUINZBURG, A. M.,
 GUTMAN, DEWITT,
 GUTTAG, HENRY,
 GWINN, RALPH W.,
 HAAS, GEORGE C.,
 HAFEN, JOHN M.,
 HAFEN, MISS WILHELMINA,
 HAGE, JOHN D.,
 HAIGHT, CHARLES S.,
 HAINES, CHARLES D.,

HALKETT, MRS. SARAH STOKES,
 HALL, A. C.,
 HALL, FRANK L.,
 HALL, HENRY J. S.,
 HALL, WM. W.,
 HALL, WM. WEBSTER,
 HALLOCK, CHARLES P.,
 HALLS, WILLIAM, JR.,
 HALSEY, CHARLES W.,
 HALSEY, HERBERT DRAKE,
 HAMANN, WILLIAM A.,
 HAMBLETON, T. EDWARD,
 HAMBURGER, LOUIS,
 HAMERSLEY, LOUIS GORDON,
 HAMILTON, MISS ELIZABETH S.,
 HAMILTON, MRS. WILLIAM PIERSON,
 HAMMOND, MRS. JOHN HENRY,
 HAMMOND, OGDEN H.,
 HAMMOND, WILLIAM F.,
 HANCE, JOHN A.,
 HARDIN, WM. B.,
 HARMON, MRS. CLIFFORD,
 HARRIMAN, MRS. HERBERT M.,
 HARRIMAN, W. A.,
 HARRIS, ALBERT H.,
 HARRISON, PHILIP,
 HARRISON, MRS. W. HENRY,
 HARRIS, CHARLES C.,
 HART, HAROLD G.,
 HARTSHORNE, J. M.,
 HARTWELL, DR. JOHN A.,
 HASSLACHER, JACOB,
 HASTINGS, MRS. THOMAS,
 HATCH, EDWARD, JR.,
 HATHAWAY, CHARLES,
 HAVEMEYER, HENRY,
 HAVEMEYER, J. C.,
 HAVEN, GEORGE G.,
 HAVEN, J. WOODWARD,
 HAVENS, ALBERT G.,
 HAWK, MRS. WILLIAM SAMUEL,
 HAWKES, MISS EVA,
 HAYES, ARCHBISHOP,
 HAYNES, WILLIAM DEFOREST,
 HAZEN, GEORGE H.,
 HECHT, RUDOLF,
 HECKER, DR. ANTON J.,
 HECK, GEORGE C.,
 HECKSCHER, MRS. AUGUST,
 HEDGES, JOH E.,
 HEIDE, HENRY, JR.,
 HEIDE, MISS BERTHA,
 HEIDE, MISS CLARA,
 HEIDE, HERMAN L.,
 HEIDE, JULIUS A.,
 HEIMAN, E.,
 HEINE, JULIUS,
 HEINTZ, JOHN C.,

*DECEASED

HELME, MRS. GEO. A.,
 HEMMING, H. G.,
 HENCKEN, HANCKE,
 HENDERSON, JOHN B.,
 HENDERSON, NORMAN,
 HENRY, FRANCIS A.,
 HENNING, EMIL F.,
 HEPBURN, MRS. A. BARTON,
 HERMANN, BERNARD F.,
 HERNSTADT, WM. L.,
 HERRICK, HAROLD,
 HERRMAN, MRS. HENRY S.,
 HERSH, ROYAL VALE,
 HERTER, MRS. ALBERT,
 HERZOG, PAUL M.,
 HESS, DR. ALFRED F.,
 HEWITT, MISS SARAH C.,
 HEWITT, HERBERT H.,
 HEWITT, PETER COOPER,
 HEYDT, CHAS. E.,
 HIBBING PARK COMMISSION
 HICKS, E. PIERPONT,
 HICKS, JOHN M. W.,
 HIGGINS, RICHARD H.,
 HIGGINSON, MRS. J. J.,
 HILL, E. B.,
 HILL, ROBERT C.,
 HINCKLEY, MRS. SAMUEL NELSON,
 HIRD, SAMUEL,
 HIRSCH, CHARLES S.,
 HIRSCHLAND, FRANZ H.,
 HOCHSCHILD, BERTHOLD,
 HODENPYL, ANTON G.,
 HODGES, HARRISON B.,
 HOE, MRS. ROBERT,
 *HOFFMAN, CHARLES FREDERICK,
 HOFFMAN, F. B.,
 HOFFMAN, MISS M. U.,
 HOFFMAN, STODDARD,
 HOFFMAN, MRS. WILLIAM M. V.,
 HOG, JAMES A.,
 HOGG, KENNETH S.,
 HOLBROOK, MRS. EDWARD,
 HOLLISTER, GEORGE C.,
 HOLMES, CHAS. LEYLAND,
 HOLTER, MRS. E. O.,
 HOMES, HENRY F.,
 HOOLEY, EDWIN S.,
 HOOKER, DR. RANSOM S.,
 HOPKINS, A. A.,
 HOPPIN, MISS FRANCES,
 HOPPIN, HAMILTON L.,
 HOPPIN, WILLIAM W., JR.,
 HORNADAY, MRS. J. C.,
 HORN, L. WILLIAM,
 HOSKIER, H. C.,
 HOUSMAN, CLARENCE J.,
 HOWARD, F. T.,

HOWE, MRS. HELEN M.,
 HOWELL, MAXWELL D.,
 HOWELL, T. A.,
 HOWLAND, MRS. HENRY E.,
 HOYT, ALFRED O.,
 HOYT, COLGATE,
 HOYT, EDWIN,
 HOYT, GERALD L.,
 HOYT, MISS GERTRUDE S.,
 HOYT MRS. HENRY R.,
 HOYT, MRS. JESSE,
 HOYT, JOHN S.,
 HOYT, MISS VIRGINIA SCOTT,
 HOYT, WALTER S.,
 HUBBARD, WALTER C.,
 HUFF, E. S.,
 HULSE, RICHARD J. E.,
 HUNGERFORD, RICHARD S.,
 HUNN, ARTHUR B.,
 *HUNTINGTON, MRS. ROBERT P.,
 HUNTINGTON, FORD,
 HUNTMAN, REV. GERARD H.,
 HUPFEL, J. CHRISTIAN G.,
 HURD, MRS. RICHARD M.,
 HURDMAN, FREDERICK H.,
 HUSSEY, FREDERICK,
 HUSTED, MISS M. KATHARINE,
 HUSTED, SEYMOUR L., JR.,
 HUTCHINS, AUGUSTUS SCHELL,
 HUTCHINS, HARLEY D.,
 HUTCHINSON, CARY T.,
 HUYLER, C. D.,
 HUYLER, F. D.,
 HYDE, AUGUSTUS L.,
 HYDE, B. T. BABBITT,
 HYDE, COURTNEY,
 HYDE, DR. FREDERICK E.,
 HYDE, MRS. WILLIAM H.,
 HYDE, W. TRUSLOW,
 IBBEKEN, ANTHONY G.,
 INGERSOLL, ROBERT H.,
 INNIS, WILLIAM R.,
 INSLEE, EDWIN W.,
 IRONS, HENRY C.,
 ISELIN, C. OLIVER,
 ISELIN, MISS GEORGINE,
 ISELIN, JOHN H.,
 ISELIN, MISS LOUISE M.,
 ISELIN, WILLIAM E.,
 ISELIN, MRS. WILLIAM E.,
 ISELIN, WILLIAM O'DONNELL,
 ISHAM, CHARLES B.,
 ISHAM, WILLIAM B.,
 ISLER, PAUL A.,
 ISRAEL, LEON,
 IVES, FREDERICK D.,
 JACKSON, FREDERICK W.,
 JACKSON, MRS. FREDERIC W.,

*DECEASED

JACKSON, R. HALSEY,
 JACOB, LAWRENCE,
 JACOBS, SAMUEL K.,
 JACOBUS, JOHN S.,
 JACQUELIN, HERBERT T. B.,
 JAFFRAY, ROBERT,
 JAMES, MRS. ARTHUR CURTISS,
 JAMES, HENRY, JR.,
 JAMES, DR. ROBERT C.,
 JAMES, MRS. WORTHAM,
 JAMES, MRS. WALTER B.,
 JAMESON, MRS. EDWIN C.,
 JENKINS, MRS. GRACE HARTLEY,
 JENKINS, A. W.,
 JENKINS, MRS. HELEN H.,
 JENKINS, JOHN C.,
 JENKINS, J. D.,
 JENKINS, WILLIAM B.,
 JENKS, ROBERT L.,
 JENNINGS, FREDERICK B.,
 JENNINGS, SIDNEY J.,
 JENNINGS, WALTER,
 JESUP, MRS. JAMES R.,
 JESUP, RICHARD M.,
 JOHN, ROBERT,
 JOHNSON, F. COIT,
 JOHNSON, GUY B.,
 JOHNSON, GILBERT H.,
 JOHNSON, THOS. W.,
 JOHNSTON, J. HERBERT,
 JOHNSTON, DR. MARIUS E.,
 JOHNSTON, WILLIAM J.,
 JONES, MRS. A. MASON,
 JONES, MRS. CADWALADER,
 JONES, CHARLES H.,
 JONES, H. BOLTON,
 JONES, MRS. DWIGHT A.,
 JONES, H. LEROY,
 JONES, LEWIS Q.,
 JONES, WM. R.,
 JUNGELUTH, KARL,
 JUST, DR. E. E.,
 KAHN, FELIX E.,
 KAHN, LOUIS,
 KAHN, DR. ROBERT J.,
 KAHN, WALTER N.,
 KANE, MRS. ARTHUR S.,
 KANE, MRS. DELANCEY,
 KARCHER, FRANK J.,
 KARELSEN, EPH A.,
 KAST, DR. LUDWIG,
 KEAN, HAMILTON FISH,
 KEAN, MRS. HAMILTON FISH,
 KEECH, FRANK B.,
 KEECH, MRS. FRANK B.,
 KEELER, MRS. C. B.,
 KEEN, BARTON L.,
 KEIL, HENRY F.,

KELCHNER, WILLIAM W.,
 KELLY, HORACE R.,
 KENNEDY, EDWARD G.,
 KENNEDY, MRS. JOHN STEWART,
 KENNEDY, MRS. H. VAN RENSSELAER,
 KENNERLY, MISS M. M.,
 KENT, EDWIN C.,
 KEPHART, REV. WILLIAM H.,
 KEPPEL, DAVID,
 KERNAN, MRS. WALTER N.,
 KETCHAM, IRVING M.,
 KEUFFEL, W. G.,
 KEYES, MRS. CHARLES W.,
 KEYSER, MRS. SAMUEL,
 KIEGER, EMIL L.,
 KING, AUGUSTUS F.,
 KING, MISS ELLEN,
 KING, MISS ETHEL,
 KING, JAMES GORE,
 KING, MRS. J. HOWARD,
 KING, MRS. LEROY,
 *KINGSBURY, NATHAN C.,
 KINGSLAND, MRS. WILLIAM M.,
 KINGSLEY, W. M.,
 KINNEY, WARREN,
 KINNEY, MRS. WARREN,
 KIP, W. RULOFF,
 KIRKHAM, WILLIAM B.,
 KISSEL, MRS. W. THORN,
 KITTREDGE, SAMUEL DANA,
 KITZ, JOSEPH,
 KLAU, MARC,
 KLEIN, D. EMIL,
 KLEIN, MILTON M.,
 KLINGENSTEIN, CHAS.,
 KNAPP, ARNOLD,
 KNAPP, MRS. HARRY K., JR.,
 KNAPP, MRS. JOSEPH PALMER,
 KNIGHT, CHARLES R.,
 KNOCH, G. ALFRED,
 KNOEDLER, ROLAND F.,
 KOEHLER, H. C.,
 KOHLMAN, CHARLES,
 KOHLSAAT, MISS EDITH M.,
 KOLB, GEORGE C., JR.,
 KOLB, FREDERICK,
 KOLES, DR. HENRY M.,
 KONTA, ALEXANDER,
 KRAUS, SAM.,
 KRECH, MRS. ALVIN W.,
 KREMER, MRS. WILLIAM N.,
 KRUNSCHEID, C. D.,
 KUHN, AUGUST,
 KUHN, FRANK,
 KUHN, JULIUS,
 KUNIHARDT, HENRY R.,
 KUNZ, GEORGE F.,
 KURZMAN, CHARLES C.,

*DECEASED

KUSER, MRS. ANTHONY R.,
 KUSER, MISS CYNTHIA G. D.,
 KUSER, JOHN DRYDEN,
 KUSER, JOHN L.,
 KUTTROFF, ADOLF,
 KUTTROFF, FREDERICK,
 LABAR, EUGENE S.,
 LACOMBE, HON. E. HENRY,
 LAGAI, DR. GEORGE,
 LAHENS, MRS. PHEBE P.,
 LAIMBEER, JOHN, JR.,
 LAMBERT, DR. ALEXANDER,
 LAMBERT, DR. A. V. S.,
 LAMBERT, DR. SAMUEL W.,
 LAMBERT, MRS. SAMUEL W.,
 LAMBORN, A. H.,
 LA MONTAGUE, MISS MARIE,
 LAMONT, MRS. THOMAS WILLIAM,
 LANDAUER, I. N.,
 LONDON, FRANCIS G.,
 LANE, MISS ANNIE E.,
 LANE, EDWARD V. Z.,
 LANE, JAMES WARREN,
 LANE, WOLCOTT G.,
 LANGE, MISS CARMEN,
 LANGE, DR. MATHILDE M.,
 LANGELOTH, MRS. JACOB,
 LANIER, MRS. JAMES F. D.,
 LAPHAM, MRS. JOHN J.,
 LATTING, CHARLES P.,
 LAUDER, MRS. GEORGE, JR.,
 LAUTER, HENRY G. F.,
 LAUTERBACH, MRS.,
 LAWRENCE, EMLEN N.,
 LAWRENCE, JOHN BURLING,
 LAWRENCE, JOHN L.,
 LAWRENCE, NEWBOLD T.,
 LAWRENCE, R. WARREN,
 LAWRENCE, MRS. AMORY A.,
 LAWRENCE, HIRAM V.,
 LAWRENCE, TOWNSEND,
 LAWRENCE, MRS. W. W.,
 LAWRENCE, W. V.,
 LAWSON, ARTHUR, M.,
 LAWSON, WM. W.,
 *LAWTON, MRS. JAMES MARSLAND,
 LEA, CHARLES M.,
 LEACH, HENRY GODDARD,
 LEAVENS, MARION H.,
 LEBARON, WM.,
 LEBERMAN, JACOB,
 LEDLIE, GEORGE,
 LEDOUX, DR. ALBERT R.,
 LEDYARD, MRS. LEWIS C.,
 LEE, MRS. FREDERIC S.,
 LEE, GEORGE C.,
 LEFFERTS, MARSHALL C.,
 LEFKOVICS, MRS. JULIET,

LEGG, GEORGE,
 LEGGETT, WARREN F.,
 LEHINTHAL, MISS M. E.,
 LEHMAIER, JAMES M.,
 LEHMAN, MEYER H.,
 LELAND, WILFRED C.,
 LEONHARD, J. HENRY,
 LEROY, EDWARD A.,
 LESLIE, J. C.,
 LESTER, GEORGE BACON,
 LESTER, HENRY M.,
 LETKEMANN, H. V.,
 LEVOR, G.,
 LEWIS, DR. WILLIAM J.,
 LEWISOHN, ADOLPH,
 LICHTENSTEIN, OSCAR R.,
 LICHTENSTEIN, PAUL,
 LIEB, J. W.,
 LIEBER, DR. HUGO,
 LINCOLN, FREDERIC W.,
 LINCOLN, MRS. LOWELL,
 LITCHFIELD, E. HUBERT,
 LITCHFIELD, EDWARD H.,
 LITTAUER, SIEGFRIED,
 LITTLEFIELD, CAPT. CHARLES W.,
 LIVERMORE, MRS. JOHN R.,
 LLOYD, MRS. J. P.,
 LOEB, HERMAN A.,
 LOEWI, HUGO V.,
 LOEWI, DR. KARL J.,
 LOGAN, FRANK J.,
 LOGAN, WM. J.,
 LOINES, RUSSELL H.,
 LOOMIS, GUY,
 LOUNSBERY, MISS ALICE,
 LOW, ETHELBERT IDE,
 LOW, WILLIAM GILMAN, JR.,
 LOWELL, JAMES B.,
 LOWTHER, CHRISTOPHER M.,
 LUDINGTON, C. H.,
 LUDLAM, MALCOLM C.,
 LUDLOW, MRS. BANYER,
 LUDLUM, C. A.,
 *LUEDER, A.,
 LUKE, DAVID L.,
 LUKE, JOHN G.,
 LUSK, PROF. GRAHAM,
 LUTTGEN, WALTHER,
 LYMAN, FRANK,
 LYMAN, MISS GRACE GREENLEAF,
 LYDIC, MRS. PHILIP,
 MCALPIN, H. D.,
 MCALPIN, MRS. CHARLES W.,
 MCALPIN, MRS. D. HUNTER, JR.,
 MCALPIN, GEORGE L.,
 MCBRIDE, MRS. HERBERT,
 MCCAGG, LOUIS B.,
 MCCALL, RICHARD,

*DECEASED

- McCLINTOCK, GILBERT S.,
 MCCOY, J. C.,
 MCCREA, W. S.,
 MCCREERY, MRS. HENRY FORBES,
 MCCULLOH, J. S.,
 MCEWEN, MRS. PAUL,
 MCGREGOR, REV. ROBERT GORDON,
 *MCKEEVER, J. LAWRENCE,
 MCKELVEY, J. J.,
 MCKELVEY, ROBERT,
 MCKIM, JOHN A.,
 MCKIM, LEROY,
 McLANE, THOMAS S.,
 *McLEAN, JAMES,
 McLEAN, MARSHALL,
 McMANUS, EDWARD F.,
 McMILLAN, FRANCIS W.,
 McNAIR, WILLIAM,
 MAAS, MILTON A.,
 MacFADDEN, C. K.,
 MacFARLANE, WALLACE,
 MACK, ARTHUR C.,
 MACNAMARA, CHAS.,
 MacNUTT, MRS. FRANCIS A.,
 MAGEE, JOHN,
 MAGER, F. ROBERT,
 MALE, FRANCIS S.,
 MALI, PIERRE,
 MALI, MRS. PIERRE,
 MALONE, L. WM.,
 *MANN, WILLIAM D'ALTON,
 MAPES, DANIEL, JR.,
 MAPES, ERNEST S.,
 MAPES, EUGENE E.,
 MARKHAM, ROBERT D.,
 MARCKWALD, ALBERT H.,
 MARCUSE, BERNHARD,
 MARKOE, HARRY,
 *MARKOE, DR. J. W.,
 MARSHALL, A. W. W.,
 MARSHALL, MRS. CHAUNCEY,
 MARSH, CHARLES CAPRON,
 MARSTON, EDWIN S.,
 MARSTON, HUNTER S.,
 MARTIN, BRADLEY, JR.,
 MARTIN, MRS. SHELTON F.,
 MARTIN, DR. WALTON,
 MARTIN, MRS. HOWARD TOWNSEND,
 MARVIN, MRS. LANGDON P.,
 MARYE, R. V.,
 MASTEN, ARTHUR H.,
 MASTERS, FRANCIS R.,
 MASTERS, MISS,
 MATHER, SAMUEL,
 MATHEUS, MRS. WILBUR K.,
 MATHEWSON, CHARLES E.,
 MATZKEN, ADOLPH,
 MAXWELL, GEORGE T.,
 MAXWELL, HOWARD W.,
 MAYER, B.,
 MAYER, JESSE,
 MAYER, JOS. B.,
 MAYER, ROSALYNDE DE LIMA,
 MAYNARD, MRS. WALTER E.,
 MEEKER, HENRY E.,
 MEEM, JAMES C.,
 MEHL, HENRY,
 MEINHARD, MORTON H.,
 MELOY, ANDREW D.,
 MESSENGER, MISS MARIA GERARD,
 MEYER, EUGENE, JR.,
 MEYER, DR. GEORGE W.,
 MEYER, MISS HELOISE,
 MEYROWITZ, EMIL B.,
 MILBURN, JOHN G.,
 MILLER, MRS. ELIZABETH C. T.,
 MILLER, MRS. CYRUS C.,
 MILLER, MRS. CHARLES E.,
 MILLER, NATHAN J.,
 MILLER, PEYTON F.,
 MILLER, W. W.,
 MILLET, MRS. F. D.,
 MILLETT, S. C.,
 MILLIKEN, MRS. GERRISH H.,
 MILLS, ABRAHAM G.,
 MILLS, ANDREW,
 MILLS, FREDERIC C.,
 MILMINE, C. E.,
 MONTGOMERY, CARLETON,
 MOORE, MRS. BARRINGTON,
 MOORE, CASIMIR DER.,
 MOORE, MRS. CASIMIR DER.,
 MOORE, CHARLES ARTHUR, JR.,
 MOORE, MISS K. T.,
 MOORHEAD, HORACE R.,
 MORAWETZ, VICTOR,
 MORDEN, WM. J.,
 MORGAN, MISS ANNE,
 MORGAN, MISS C. L.,
 MORGAN, EDWIN D.,
 MORGAN, MRS. J. B.,
 MORGAN, MRS. PIERPONT,
 MORGAN, JUNIUS S., JR.,
 MORGAN, JUNIUS S.,
 MORGAN, WILLIAM FELLOWES,
 MORGAN, WILLIAM FORBES, JR.,
 MORGENTHAU, M. L.,
 MORRIS, DAVE H.,
 MORRIS, GOUVERNEUR,
 MORRIS, LEWIS SPENCER,
 MORRISON, N. H.,
 MORTON, MRS. PAUL,
 MOSLE, A. HENRY,
 MOSS, ERNEST J.,
 MOTLEY, JAS. M.,
 MOTT, HENRY C.,

*DECEASED

MOTT, MRS. JOHN BOWNE,
 MOULTON, ARTHUR J.,
 MUELLER, CHARLES F.,
 MULLER, CARL,
 MUEHLFELD, FRANK J.,
 MULHALL, MISS SARAH G.,
 MUNN, CHARLES A.,
 MUNROE, HENRY W.,
 MUNSEY, FRANK A.,
 MURGATROYD, JOHN,
 MURTHA, THOMAS F.,
 MURPHY, MRS. FELIX TONE,
 MURPHY, GRAYSON,
 MUSCHENHEIM, FREDERICK A.,
 MYERS, WILLIAM S.,
 NADAL, MRS. CHAS. C.,
 NEILSON, DR. HOWARD S.,
 NEILSON, WALLACE PLATT,
 NELLES, HUGO C.,
 NELSON, JAMES W.,
 NESMITH, JAMES,
 NEUMOEGEN, M. L.,
 NEUMOEGEN, MRS. M. L.,
 NEUSTADT, MRS. S.,
 NEWCOMBE, MRS. CHAS. M.,
 NICHOLS, ACOSTA,
 *NICHOLS, JOHN W. T.,
 NICOLL, BENJAMIN,
 NICOLL, MRS. BENJAMIN,
 NILES, ROBERT L.,
 NOLKER, ROBERT E.,
 NORMAN, MRS. BRADFORD,
 NORRIE, MISS MARY,
 NORRIE, MRS. E. L. BREESE,
 NORTH, GEORGE B.,
 NORTON, W. P.,
 NOTMAN, GEORGE,
 NOTMAN, HOWARD,
 OBERMAYER, CHARLES J.,
 O'BRIEN, PERCY,
 O'BRIEN, PERCY J.,
 O'CONNELL, DR. J. H.,
 O'CONNOR, JAMES B.,
 OCHS, ADOLPH S.,
 OETTINGER, DR. P. J.,
 OFFERMAN, JOHN,
 OGDEN, CHARLES W.,
 OGDEN, DAVID B.,
 OGDEN, J. R.,
 OGDEN, MISS MARY F.,
 OHMEIS, JOHN,
 OHMEIS, P. M.,
 *OLCOTT, DUDLEY,
 OLCOTT, DUDLEY, 2ND,
 OLCOTT, E. E.,
 OLIN, MRS. STEPHEN H.,
 OLNEY, ELAM WARD,
 OLYPHANT, ROBERT,

ONATIVIA, J. VICTOR,
 OPENHYM, GEORGE J.,
 OPPENHEIMER, DR. HENRY S.,
 OPPENHEIMER, DAVID E.,
 ORDWAY, SAMUEL H.,
 ORTH, CHARLES D.,
 OTTINGER, MARX,
 OTTLEY, JAMES H.,
 OUTERBRIDGE, MRS. ADOLPH J.,
 OUTERBRIDGE, DR. PAUL,
 PACKARD, MRS. E. WINSLOW,
 PAGE, WILLIAM H.,
 PAINE, MRS. AUGUSTUS G.,
 PAINTER, DR. H. McM.,
 PALMER, EDGAR,
 PALMER, HOWARD,
 PALMER, DR. T. S.,
 PARDOE, DR. J. B.,
 PARISH, WAINWRIGHT,
 PARISH, MRS. EDWARD C.,
 PARKER, A. W.,
 PARKER, EDWARD LUBLOW,
 PARKER, JUNIUS,
 PARKER, WINTHROP,
 PARKS, ELTON,
 PARPART, WILLIAM E.,
 PARSONS, MISS GERTRUDE,
 PARSONS, HERBERT,
 PARSONS, MRS. JOHN E.,
 PARSONS, MISS MARY,
 PARSONS, WILLIAM BARCLAY,
 PARTRIDGE, EDWARD L.,
 PATON, DAVID,
 PATTERSON, HENRY STUART,
 PATTERSON, T. H. HOGE,
 PAYNE, MRS. HENRY W.,
 PEABODY, STEPHEN,
 PEARSON, MRS. FREDERICK,
 PEASE, DR. J. G.,
 PEASE, J. GRANT,
 PECK, CHARLES E.,
 PECK, DR. CHAS. H.,
 PECK, LEICESTER O.,
 PECKHAM, MISS MARIE LOUISE,
 PEGRAM, EDWARD S.,
 PENDLETON, FRANCIS KEY,
 PENTOLD, EDMUND,
 PENROSE, DR. CHARLES B.,
 PERCIVAL, L. A. D.,
 PERKINS, JR., GEORGE W.,
 PERKINS, MISS HATTIE W.,
 PERKINS, GEORGE W., JR.,
 PERRY, MRS. WILLIAM A.,
 PETERS, MRS. CHARLES G.,
 PETERS, WILLIAM RICHMOND,
 PETERSON, WM.,
 PFEIFFER, CURT G.,
 PFEIFFER, GEORGE,

*DECEASED

- PFORZHEIMER, CARL H.,
 PHELPS, MRS. ANSEL,
 PHELPS, DR. GVERNEUR M.,
 PIATTI, DR. VIRGIL C.,
 PICKHARDT, CARL,
 PIEL, GOTTFRIED,
 PIEL, MICHAEL,
 PIERREPONT, MISS ANNA JAY,
 PIERREPONT, R. STUYVESANT,
 PIERSON, GEN. J. FRED,
 PILLOT, P. STUYVESANT,
 PINCHOT, GIFFORD,
 PITNEY, MRS. J. O. H.,
 PLATT, CHARLES H.,
 *PLATT, FRANK H.,
 PLATT, HENRY B.,
 PLATT, LIVINGSTON,
 PLATTEN, J. W.,
 POMEROY, DANIEL E.,
 POMROY, MRS. H. K.,
 POND, MISS FLORENCE L.,
 POOR, HENRY V.,
 POOR, ROGER, M.,
 POPE, G. D.,
 POPE, MRS. JAMES E.,
 PORTER, ALEXANDER J.,
 PORTER, HORACE,
 PORTER, LOUIS H.,
 PORTER, WILLIAM L.,
 POST, ABRAM S.,
 POST, MRS. CHARLES ALFRED,
 POST, GEORGE B.,
 POST, WILLIAM H.,
 POTTER, MISS BLANCHE,
 POTTER, EDWARD CLARKSON,
 POTTER, FREDERICK,
 POTTER, JAMES BROWN,
 POTTER, ORLANDO B.,
 POTTER, R. BURNSIDE,
 POTTER, MRS. R. BURNSIDE,
 POTTER, FULLER,
 POTTS, WILLIAM BREVOORT,
 POWELL, STEPHEN A.,
 PRATT, ALBERT H.,
 PRATT, GEORGE D.,
 PRATT, H. L.,
 PRATT, JOHN T.,
 PRATT, MRS. JOHN T.,
 PRATT, SAMUEL,
 PRENTICE, JOHN HILL,
 PRENTISS, MISS HENRIETTA,
 PRESTON, VERYL,
 PRIDDY, LAWRENCE,
 PRIME, MISS CORNELIA,
 PRINCE, EDWARD S.,
 PRINCE, LEO M.,
 PROCTER, WILLIAM,
 PROCTOR, MRS. CHARLES E.,
 PROCTOR, MRS. MARIA W. W.,
 PROCTOR, THOMAS R.,
 PROCTOR, WM. ROSS,
 PROVOST, MRS. CORNELIUS W.,
 PULITZER, MRS. JOSEPH,
 *PULSIFER, MRS. N. T.,
 PUTMAN, IRVING,
 PUTNEY, MISS EVA C.,
 PYLE, D. H. MCALPIN,
 PYLE, MRS. JAMES TOLMAN,
 PYNE, MRS. M. TAYLOR,
 QUINCY, CHARLES F.,
 QUINTARD, DR. EDWARD,
 RANDOLPH, WILLIAM W.,
 RANFT, RICHARD,
 RANGER, STANLEY,
 RABE, DR. R. F.,
 RASMUS, W. T.,
 RASMUS, W.,
 RATHBORNE, RICHARD C.,
 RAUCH, WILLIAM,
 RAVNER, WM.,
 RAVNOR, IRVING,
 RAYMOND, H. E.,
 READ, MRS. WILLIAM A.,
 REDMOND, MISS E.,
 REDMOND, MRS. HENRY S.,
 REED, ROBERT R.,
 REEDS, CHESTER A.,
 REEVES, MARK W.,
 REID, JOHN,
 REID, OGDEN MILLS,
 REID, MRS. OGDEN MILLS,
 REID, WALLACE,
 REID, MRS. WHITELAW,
 REINHARDT, GEORGE N.,
 REISINGER, CURT. H.,
 REMINGTON, FRANKLIN,
 REMSEN, CHARLES,
 RENSILAW, HOWARD PRICE,
 REYNAL, MRS. NATHANIEL C.,
 REYNOLDS, E. B.,
 REYNOLDS, THOS. A.,
 RHEINLANDER, MRS. F. W.,
 RHETT, MISS FLORENCE,
 RHINELANDER, PHILIP,
 RICE, CHARLES G.,
 RICHARD, MISS ELVINE,
 RICHARD, O. L.,
 RICHARD, EDWIN A.,
 RICHARDS, CHARLES A.,
 RICHARDS, EBEN,
 RICHARDS, E. O.,
 RICHARDSON, MRS. C. TIFFANY,
 RICHARDSON, MRS. D. E.,
 RIEM, SIMON R.,
 RIGGS, GEO. C.,
 RIKER, WM. J.,

*DECEASED

RIPLEY, JULIEN A.,
 RIPPE, MRS. E. J.,
 ROBB, MRS. N. THAYER,
 ROBBINS, CHANDLER,
 ROBBINS, MRS. HELEN C.,
 ROBERTS, G. THEODORE,
 ROBERTS, MRS. CHAS. HENRY,
 ROBERTS, MISS GRACE VAN BRAAM,
 ROBERTS, OWEN F.,
 ROBERTSON, ALBERT,
 ROBERTSON, L. J.,
 *ROBERTSON, R. H.,
 ROBINSON, MRS. DOUGLAS,
 ROBINSON, EDWARD,
 ROBINSON, G. H.,
 ROBINSON, MRS. MONROE D.,
 ROBINSON, MISS PAULINE,
 ROBISON, WILLIAM,
 ROCHE, MRS. BURKE,
 ROCKEFELLER, MRS. WILLIAM G.,
 ROCKEFELLER, MRS. J. D., JR.,
 ROCKWOOD, WILLIAM H.,
 RODEWALD, F. L.,
 ROE, CHARLES F.,
 ROE, FRANK O.,
 ROE, IRVING L.,
 ROGERS, E. L.,
 ROGERS, CHAS. F.,
 ROGERS, MRS. CHAS. F.,
 ROGERS, MRS. FRANCIS,
 ROGERS, HUBERT E.,
 ROGERS, MRS. WILLIAM BEVERLEY,
 ROKENBAUGH, HENRY S.,
 ROLLE, AUGUSTUS J.,
 ROLLINS, FRANK S.,
 ROMBOUGH, JOHN B.,
 ROOF, CLARENCE M.,
 ROOSEVELT, MRS. JAMES,
 ROOSEVELT, MRS. HILBORNE L.,
 ROOSEVELT, W. EMLEN,
 ROOT, ELIHU,
 ROSE, MRS. A. SUMNER,
 ROSENTHAL, SYLVAN E.,
 ROTH, FREDERICK G. R.,
 ROTH, J. E.,
 ROTHBARTH, ALBERT,
 ROTHLAUF, REV. ANTHONY J.,
 ROTHWELL, JAMES E.,
 ROUNDS, R. S., JR.,
 ROWLAND, THOMAS,
 RUHE, LOUIS,
 RUHL, LOUIS,
 RUMSEY, MRS. CHARLES CARY,
 RUNYON, CARMAN R.,
 RUNYON, E. W.,
 RUNYON, WALTER CLARK,
 RUPERTI, JUSTUS,
 RUPPERT, MRS. JACOB,

RUSSELL, MRS. HORACE,
 RUSSELL, DR. JOHN F.,
 RYAN, JOHN BARRY,
 RYAN, MRS. THOMAS F.,
 RYLE, ARTHUR,
 RYLE, GRAHAM,
 SACHS, ARTHUR,
 SACKETT, MISS HELEN H.,
 SAGE, JOHN H.,
 SAMPSON, ALDEN,
 SAMPSON, CHARLES E.,
 SANDHAGEN, H.,
 SANDS, MISS ANNE A.,
 SANDS, MRS. BENJAMIN AYMAR,
 SANGER, MRS. RALPH,
 SARG, F. A.,
 SARGENT, HENRY B.,
 SARGENT, GEORGE LLOYD,
 SATTERLEE, MRS. H. L.,
 SATTERWHITE, PRESTON P.,
 SAUTER, F.,
 SAUTER, FRED, JR.,
 SCARBURGH, ROBERT S.,
 SCHAEFER, ANDREAS F.,
 SCHAEFER, EDWARD C.,
 SCHAEFER, HENRY,
 SCHALL, W.,
 SCHANK, GEORGE E.,
 SCHAU, C. F.,
 SCHAUFFLER, MRS. A. F.,
 SCHIEFER, ANTON H.,
 SCHENCK, HENRY DEB.,
 SCHENER, A. L.,
 SCHEUR, A. L.,
 SCHIFF, GUSTAVE H.,
 SCHIEFFELIN, MRS. H. M.,
 SCHIEFFELIN, WILLIAM JAY,
 SCHIMMEL, SIEGFRIED,
 SCHLICKER, CARL P.,
 SCHMELZEL, GEORGE,
 SCHMELZEL, MISS JANE E.,
 SCHMELZEL, JAMES H.,
 SCHMIDT, WILLIAM P.,
 SCHMIDT, WILLIAM H.,
 SCHMIDT, FEDOR,
 SCHNABEL, R. A.,
 SCHNAKENBERG, D.,
 SCHNIEWIND, EWALD H.,
 SCHNIEWIND, H., JR.,
 SCHOEN, CARL,
 SCHOLLE, A. H.,
 SCHOENBRUNN, S. A.,
 SCHRAG, CHARLES A.,
 SCHRAG, LOUIS,
 *SCHREITER, HENRY,
 SCHULTZ, BERNHARD,
 SCHUYLER, MISS LOUISA LEE,
 SCHWAB, HENRY B. DEV.,

*DECEASED

- SCHWARTZ, LEWIS F.,
 SCHWARTZ, HERBERT F.,
 SCHWARTZ, HENRY F.,
 SCHWARZLER, ALBERT J.,
 SCOFIELD, MISS MARION,
 SCOTT, DONALD,
 SCOTT, HON. FRANCIS M.,
 SCOTT, MRS. FRANK H.,
 SCOTT, THOMAS BLYTHE,
 SCOTT, WILLIAM,
 SCOVILLE, HERBERT,
 SCOVILLE, ROBERT,
 SCRIBNER, ARTHUR H.,
 SCRIBNER, CHARLES,
 SCRIBNER, MRS. CHARLES,
 SCHYMSER, MRS. JAMES A.,
 SCUDDER, HEWLETT,
 SEAMAN, DR. LOUIS L.,
 SEDGWICK, ROBERT,
 SEE, A. B.,
 SEIDENBERG, OTTO,
 SELIGMAN, A. J.,
 SELIGMAN, EDWIN R. A.,
 SELICMAN, GEORGE W.,
 SELIGMAN, MRS. ISAAC N.,
 SELIGMAN, JEFFERSON,
 SELIGMAN, JOSEPH L.,
 SELIGMAN, MRS. JULIA,
 SENFF, MRS. CHARLES H.,
 SETON, ALFRED,
 *SEXTON, LAWRENCE E.,
 SEYMOUR, EDMUND,
 SHATTUCK, A. R.,
 SHAW, FRANK A.,
 SHEETS, DR. E. A.,
 SHEEHAN, MRS. WILLIAM F.,
 SHEFFIELD, JAMES R.,
 SHEFFIELD, MRS. JAMES R.,
 SHIELDON, EDWARD W.,
 SHIELDON, WILLIAM C.,
 SHEPARD, DR. GEORGE A.,
 SHEPARD, FINLEY J.,
 SHEPARD, MRS. ELLIOTT F.,
 SHEPARD, MISS ANNIE R.,
 SHIMAN, DAVID,
 SHIPMAN, RICHARD D.,
 SHIPWAY, SAMUEL W.,
 SHOENAKER, HENRY W.,
 SHONNARD, HORATIO S.,
 SHULHOF, OTTO B.,
 SIBLEY, MRS. H. W.,
 SIEDENBURG, REINHARD, JR.,
 SIEGEL, JACOB,
 SIEGEL, WILLIAM,
 SILLECK, HENRY G., JR.,
 SILLECK, MRS. HENRY G., JR.,
 SILLIMAN, JAMES R.,
 SILLIMAN, HARPER,
 SMALL, ALFRED L.,
 SIMON, ROBERT F.,
 SIMON, THEO. A.,
 SIMPSON, JOHN W.,
 SIMPSON, ERNEST L.,
 SINCLAIR, MRS. JOHN,
 SINCLAIR, MRS. WILLIAM,
 SINGER, ARTHUR J.,
 SKEEL, DR. FRANK D.,
 SKINNER, M. P.,
 SLADE, FRANCIS LOUIS,
 SLAUGHTER, R. B.,
 SLAVEN, RALPH E.,
 SLOAN, RUSSELL R.,
 SLOAN, MRS. SAMUEL,
 SLOCUM, H. J., JR.,
 SLOCUM, COL. J. J.,
 SLOCUM, THOMAS W.,
 SLOSS, A. M.,
 SMIDT, THOMAS,
 SMILEY, DANIEL,
 SMILLIE, JAMES C.,
 SMILLIE, RALPH,
 SMITH, AUGUSTINE J.,
 SMITH, AUGUSTUS,
 SMITH, C. HAROLD,
 SMITH, MRS. CHARLES S.,
 SMITH, D.,
 SMITH, ELIAS D.,
 SMITH, PIERRE J.,
 SMITH, ROBERT K.,
 SMITHERS, CHARLES,
 SMITHERS, F. S.,
 SMYTH, FRANCIS,
 SNARE, FREDERICK,
 SNOW, E. G.,
 SNYDER, VALENTINE P.,
 SOLDWEDEL, FREDERICK A.,
 SONDHEIM, PHEINAS,
 SORCHIAN, MRS. VICTOR,
 SOULE, LOUIS H.,
 SPALDING, KEITH,
 SPALDING, H. BOARDMAN,
 SPARROW, MRS. EDWARD W.,
 SPEAR, JAMES, JR.,
 SPEDDEN, FREDERIC O.,
 SPENCER, MRS. EDWARDS,
 SPENCER, ALEXANDER H.,
 SPERRY, WILLIAM M.,
 SPEYEL, MRS. JAMES,
 SPITZNER, GEORGE W.,
 SPOFFORD, MRS. J. L.,
 SPRAGUE, MRS. FRANK J.,
 SPRIGG, JUDGE CARROLL,
 SPRING, MISS ANNA RIKER,
 SPRINGS, RICHARD A.,
 SPURR, E. W.,
 SQUIBB, DR. EDWARD H.,

*DECEASED

SQUIRE, EBEN H. P.,
 STAFFORD, WILLIAM FREDERICK,
 STAFFORD, MRS. WILLIAM FREDERICK,
 STAHL, ADOLFO,
 STALLFORTH, F.,
 STANLEY, ALFRED,
 STANTON, FRANK McMILLAN,
 STANTON, JOHN R.,
 STAPLES, MRS. JOHN J.,
 STARR, LOUIS MORRIS,
 STEARNS, E. WARD,
 STEARNS, LOUIS,
 STEELE, CHARLES,
 STEELE, MRS. CHARLES,
 STEERS, J. RICH,
 STEIN, MRS. ALEXIS W.,
 STEINECK, EDWARD,
 STEINHARDT, JOSEPH H.,
 STEINMETZ, JOHN A.,
 STEPHENS, OLIN J.,
 STEPHENS, RODERICK,
 STERN, BENJAMIN,
 STEVENS, FREDERIC W.,
 STEVENS, OSCAR E.,
 STEVENS, MRS. RICHARD,
 STEWART, ALEXANDER M.,
 STEWART, CECIL P.,
 STEWART, ELWIN K.,
 STEWART, WILLIAM R.,
 STICKELS, EDWARD H.,
 STILLMAN, CHAUNCEY,
 STILLMAN, MRS. C. C.,
 STILLMAN, JOSEPH F.,
 STILLMAN, JAMES A.,
 STIMPSON, EDWIN B.,
 STIMSON, DR. DANIEL M.,
 STOKES, FREDERICK A.,
 STOKES, MRS. JAMES,
 STONE, MISS ANNIE,
 STONE, CHARLES A.,
 STONE, MISS ELLEN J.,
 STORRS, LUCIUS S.,
 STOUT, JOSEPH S.,
 STOUT, ANDREW V.,
 *STRAIGHT, WILLARD,
 STRANGE, A. B.,
 STRAUS, H. GRANT,
 STRAUS, MRS. NATHAN, JR.,
 STRAUS, PERCY S.,
 STRAUSS, ALBERT,
 STRAUSS, FREDERICK,
 STRAUSS, CHARLES,
 STRAUSS, MARTIN,
 STREAT, JAMES,
 STREET, W. A.,
 STROHMEYER, F. G.,
 STRONG, BENJAMIN, JR.,
 STRONG, RICHARD A.,

STROOCK, JOSEPH,
 STROOCK, LOUIS S.,
 STRUTHIERS, DUNCAN,
 STUART, ROBERT,
 STURGES, CLARENCE B.,
 STURGES, HENRY C.,
 STRUTHIERS, DUNCAN,
 SUCKLEY, MRS. R. B.,
 SULLIVAN, MRS. JAMES,
 SUTRO, LIONEL,
 SUYDAM, LAMBERT,
 SWAN, MRS. J. ANDREWS,
 SWAN, JAMES A.,
 SWANSON, DR. F. J.,
 SWANZY, MRS. FRANCIS MILLS,
 SWARTWOUT, ROBERT EGERTON,
 WAYNE, MRS. FRANCIS B.,
 SWENSON, S. A.,
 SWORDS, WILLIAM VOORHIS,
 SYMS, DR. PARKER,
 TABER, MISS MARY,
 TABOR, F. H.,
 TAFT, HENRY W.,
 TAG, ALBERT,
 TAKAMINE, JOKICHI, JR.,
 TALCOTT, MRS. JAMES,
 TALMAGE, MRS. E. T. H.,
 TANENBAUM, MOSES,
 TATHAM, CHARLES,
 TAUSSIG, NOAH W.,
 TAYLOR, MRS. HENRY OSBORN,
 TAYLOR, HENRY R.,
 TAYLOR, JAMES B.,
 TAYLOR, LLOYD,
 TAYLOR, MOSES,
 TAYLOR, WILLIAM R. K.,
 TAYLOR, ROBERT C.,
 TAYLOR, WILLIAM A.,
 TENNEY, DANIEL G.,
 TERRELL, CLYDE B.,
 TERRY, CHARLES T.,
 TERRY, MRS. JOHN T.,
 TERRY, RODERICK, JR.,
 TERRY, WYLLYS,
 THACHER, ARCHIBALD G.,
 THACHER, MRS. GEORGE W.,
 *THACHER, THOMAS,
 THAW, J. C.,
 THAYER, HARRY BATES,
 THEBAUD, MRS. PAUL,
 THOMAS, MRS. HOWARD L.,
 THOMAS, SETH E., JR.,
 THOMPSON, ARTHUR G.,
 THOMPSON, FARRINGTON M.,
 THOMPSON, MRS. J. TODD HUNTER,
 THOMPSON, WILLIAM BOYCE,
 THOMSON, A. T.,
 THOMSON, GIRAUD F.,

*DECEASED.

- THORLEY, CHARLES,
 THORNE, MRS. EDWIN,
 THORNE, CHAS. STOCKTON,
 *THORNE, JONATHAN,
 THORNE, MRS. JONATHAN,
 THORNE, MRS. W. V. S.,
 THURBER, H. F.,
 THURSBY, SIDNEY,
 TIEDEMANN, HENRY F.,
 TIEDEMANN, THEODORE,
 TIERS, MRS. ALEXANDER H.,
 TIFFANY, LOUIS C.,
 TILFORD, MRS. HENRY MORGAN,
 TILT, ALBERT,
 TILTON, JOSEPH W.,
 TIMMERMAN, HENRY G.,
 TIMOLAT, JAMES G.,
 TIMPSON, JAMES,
 TOD, J. KENNEDY,
 TODD, M. PARSONS,
 TODD, WALTER B.,
 TONNELE, MRS. JOHN N.,
 TOWNES, M. G.,
 *TOWNSEND, MISS AMY C.,
 TOWNSEND, MRS. E. M.,
 TOWNSEND, EDWIN S.,
 TOWNSEND, H. N.,
 TOWNSEND, HOWARD,
 TOWNSEND, ISAAC,
 TOWNSEND, JAMES B.,
 TOWNSEND, MRS. JAMES M.,
 TOWNSEND, J. H.,
 TRENCH, CHARLES S.,
 TRIMBLE, MRS. RICHARD,
 TROESCHER, A. F.,
 TRUSLOW, HENRY A.,
 TUCKER, MRS. AGNES J.,
 TUCKER, CARL,
 TUCKERMAN, ALFRED,
 TUCKERMAN, PAUL,
 TURNBULL, ARTHUR,
 TURNBULL, JOHN,
 TURNBULL, MRS. RAMSAY,
 TURNBULL, WILLIAM,
 TURNURE, GEORGE E.,
 TUSKA, BENJAMIN,
 TWEED, MRS. CHARLES H.,
 TWINING, E. S.,
 UHL, OSWALD W.,
 UPMANN, CARL,
 VALENTINE, MRS. PATRICK A.,
 VALENTINE, DR. WILLIAM A.,
 VAN BEUREN, FREDERICK T., JR.,
 VAN CORTLANDT, AUGUSTUS,
 VAN COTT, HARVEY A.,
 VANDERBENT, TEUNIS J.,
 VANDERGRIFF, S. H.,
 VANDERPOEL, AMBROSE E.,
 VANDERPOEL, MRS. JOHN A.,
 VANDERLIP, FRANK A.,
 VAN DER SMISSEN, DR. G. J.,
 VAN GERBIG, BAREND,
 VAN INGEN, MRS. EDWARD,
 VAN INGEN, MRS. E. H.,
 VAN NORDEN, OTTOMAR II.,
 VAN NOSTRAND, B. T.,
 VAN SINDEREN, HOWARD,
 VAN SLYCK, GEORGE W.,
 VAN VALZAH HAYES, DR. WM.,
 *VAN WINKLE, EDGAR B.,
 VARIAN, WILBUR L.,
 VEATH, A. C.,
 VELTEN, WILLIAM F.,
 VERNAY, ARTHUR S.,
 VERNON, MRS. CATHERINE D.,
 VESPER, KARL H.,
 VIETOR, THOMAS F.,
 VILLA, ALFONSO P.,
 VIRGIN, DR. FREDERIC O.,
 VOELKER, JOHN PH.,
 VOGEL, HERMAN,
 VOIGHT, WILLIAM L.,
 VON BERNUTH, FREDERICK A.,
 VON GONTARD, MRS. ALEXANDER,
 VON LENDERKE, JUSTUS,
 VON ZEDLITZ, MRS. ANNA M.,
 VUILLEUMIER, DR. JULES A.,
 WADLEIGH, FRANCIS RAWLE,
 WAGNER, CHARLES H.,
 WAGSTAFF, MRS. ALFRED,
 WAINWRIGHT, MRS. J. HOWARD,
 WAKELEE, JUSTUS I.,
 WALBRIDGE, HENRY D.,
 WALCOTT, FREDERIC C.,
 WALDO, R.,
 WALES, EDWARD H.,
 WALKER, E. R.,
 WALKER, JOSEPH, JR.,
 WALKER, BRYANT,
 WALKER, GUSTAVUS A.,
 WALKER, W. I.,
 WALLER, STEWART,
 WALLERSTEIN, DR. MAX,
 WALSH, MRS. JULIUS, JR.,
 WALTER, EDGAR,
 WALTER, MARTIN,
 WALTER, WILLIAM I.,
 WALTY, A. R.,
 WARBURG, PAUL M.,
 WARD, ARTEMAS,
 WARDNER, HENRY STEELE,
 WARDWELL, ALLEN,
 WARENDORFF, HERMAN,
 WARNOCK, JAMES K.,
 WARNOCK, JAMES KNOX,
 WARREN, GEORGE H.,

*DECEASED.

WARREN, MRS. J. HOBART,
 WARREN, LLOYD,
 WASHBURN, THOMAS G.,
 WASHBURN, WM. IVES,
 WATERBURY, JOHN I.,
 WATERBURY, MISS,
 WATRISS, MRS. HELEN B.,
 WATSON, MRS. J. HENRY,
 WATSON, CHARLES F.,
 WATT, THOMAS L.,
 WEARNE, HARRY,
 WEATHERBEE, MRS. EDWIN H.,
 WEBB, MRS. ALEXANDER S.,
 WEBB, F. EGERTON,
 WEBB, J. GRISWOLD,
 WEBB, MRS. VANDERBILT,
 WEBB, MRS. WILLIAM SEWARD,
 WEEKS, ANDREW GARY,
 WEEKS, JOHN E.,
 WEIGLE, CHARLES H.,
 WEILER, MRS. JULIA O.,
 WEINIG, BERNARD,
 WEISE, MRS. CHAS.,
 WEISS, JULIUS,
 WEITLING, WILLIAM W.,
 WELCH, HENRY K. M.,
 WELCH, MRS. S. CHARLES,
 WELLS, MRS. JOHN,
 WELLS, OLIVER J.,
 WESSEL, J. HENRY,
 WESSELL, ARTHUR L.,
 WEST, DR. WILLIAM,
 WESTOVER, M. F.,
 WHARTON, MISS N. C.,
 WHELOCK, MRS. G. G.,
 WHELOCK, WM. H.,
 WHITE, A. M.,
 WHITE, CAROLINE,
 WHITE, HAROLD T.,
 WHITE, LEONARD D.,
 WHITEHOUSE, J. HENRY,
 WHITEHOUSE, NORMAN,
 WHITEHOUSE, WILLIAM F.,
 WHITING, DR. CHARLES A.,
 WHITING, H. F.,
 WHITING, MISS GERTRUDE,
 WHITMAN, CLARENCE,
 WHITMAN, WILLIAM, JR.,
 WHITNEY, H. F.,
 WHITEMORE, HOWARD,
 WIBORG, F. B.,
 WICKERHAM, GEORGE W.,
 WIESE, WILLIAM,
 WIGGLESWORTH, HENRY,
 WILKINS, F. H.,

WILLCOX, MISS MARY A.,
 WILLCOX, WILLIAM G.,
 WILLIAMS, ALEX. S.,
 WILLIAMS, ALLEN S.,
 WILLIAMS, ARTHUR,
 WILLIAMS, C. S.,
 WILLIAMS, CLARENCE E.,
 WILLIAMS, MRS. PERCY H.,
 WILLIAMS, RICHARD H., JR.,
 WILLIAMS, WILLIAM,
 WILLIAMS, WILLIAM H.,
 WILLIAMSON, MRS. BUTLER,
 WILLIS, W. P.,
 WILLISTON, JAMES R.,
 WILSON, CHAS. B.,
 WILSON, HENRY WILLIAM,
 WILSON, HERRICK EAST,
 WILSON, JAMES GODFREY,
 WILSON, M. ORME,
 WILSON, R. THORNTON,
 WIMPFHEIMER, CHAS. A.,
 WINGATE, GEORGE W.,
 WINTER, EMIL,
 WINTER, JULIUS,
 WINTHIROP, EGERTON L., JR.,
 WINTHIROP, MRS. ROBERT,
 WISE, EDMOND E.,
 WISNER, CHARLES,
 WITHERBEE, MRS. FRANK S.,
 WITTMAN, JOSEPH,
 WOBIE, G. ARTHUR,
 WOOD, ARNOLD,
 WOOD, GILBERT CONGDON,
 WOOD, J. WALTER,
 WOOD, WILLIAM CONGDON,
 WOODHOUSE COMPANY, J. S.,
 WOODHOUSE, MRS. J. STUYVESANT,
 WOODHOUSE, MRS. JOSEPH S.,
 WOODRUFF, ALBERT C.,
 WOODWARD, KENNETH N.,
 WOODWARD, MRS. WILLIAM,
 WOOLEY, C. M.,
 WORCESTER, WILFRED J.,
 WORK, BERTRAM G.,
 WORTLEY, R. M. STUART,
 WRIGHTSMAN, C. J.,
 WULF, WILLIAM C.,
 WYCKOFF, MRS. PETER BROWN,
 YORKE, GEORGE M.,
 YOUNG, A. MURRAY,
 YOUNG, MRS. A. MURRAY,
 ZABRISKIE, GEORGE A.,
 ZEINDER, C. H.,
 ZINN, GEORGE,
 ZINSSER, AUGUST,

ZOLLER, CHARLES,

Ladies' Auxiliary

ADEE, MISS E. L.,
 BAKER, MRS. GEORGE F., JR.,
 CLARK, MRS. GEO. C.,
 CLARK, MRS. J. F. A.,
 CUYLER, MISS,
 FIELD, MRS. WM. B. OSGOOD,
 GRANT, MRS. DEFOREST,
 HAMILTON, MRS. WM. PIERSON,
 HARRIMAN, MRS. J. BORDEN,
 HOYT, MRS. HENRY R.,
 HASTINGS, MRS. THOS.,
 ISELIN, MRS. ARTHUR,
 MORGAN, MRS. PIERPONT,
 MORGAN, MISS ANNE,
 MAYNARD, MRS. WALTER E.,
 MARTIN, MRS. SHELTON E.,
 NILES, MRS. WM. WHITE,
 OLIN, MRS. STEPHEN H.,

OSBORN, MRS. H. FAIRFIELD,
 PARSONS, MISS,
 PYNE, MRS. PERCY R.,
 ROCKEFELLER, MRS. WM. G.,
 RHETT, MISS,
 ROBINSON, MISS PAULINE,
 STEVENS, MRS. RICHARD,
 SANGER, MRS. RALPH,
 SHEPARD, MRS. FINLEY J.,
 SPEYER, MRS. JAMES,
 TILFORD, MRS. HENRY M.,
 TRIMBLE, MRS. RICHARD,
 *TOWNSEND, MISS AMY,
 TOWNSEND, MISS AMY,
 THORNE, MRS. WM. V. S.,
 WEBB, MRS. ALEXANDER, S.,
 WOODWARD, MRS. WM.

Summary of Membership

Honorary and Corresponding Members.....	15
Fellows	35
Benefactors	5
Founders in Perpetuity	15
Founders	12
Associate Founders	9
Patrons	32
Life Members	336
Annual Members	2,178
Sustaining Members	12
Ladies' Auxiliary	35
	<hr/>
	2,684

Qualification for Regular Membership

Annual Members	\$ 10	Associate Founders	\$ 2,500
Life Members	200	Founders	5,000
Patrons	1,000	Founders in Perpetuity	10,000
Benefactors	\$25,000		

*DECEASED.

Form of Bequest

*I do hereby give and bequeath to the "NEW YORK ZOOLOGICAL
SOCIETY," of the City of New York,.....*

.....

.....



CHAPMAN-BURCHELLI ZEBRAS

These specimens were brought from South Africa by Mr. A. K. Haagner.
Photograph by Elwin R. Sanborn.

REPORT OF
THE EXECUTIVE COMMITTEE
TO THE BOARD OF MANAGERS.

THE Executive Committee respectfully submit the following report to the Board of Managers for the year 1920:

The Committee regret to announce the death on May 16, 1920, of Mr. Levi P. Morton, a Founder in Perpetuity. Mr. Morton was President of the New York Zoological Society from 1897 to 1908 and a member of the Board of Managers since its organization.

The Committee also report with regret the death of the late Jacob H. Schiff, on September 25, 1920. Mr. Schiff was the first to urge the establishment of an Endowment Fund, to which he subscribed liberally.

Resolutions passed on the occasion of the deaths of the above appear at the end of this report.

Mr. Henry D. Whiton was elected to fill the vacancy in the Class of 1921 caused by the death of the late Levi P. Morton.

MEMBERSHIP.

During the year 1920, a call for new members was sent out to a selected list of names, which resulted in securing 17 new Life Members and 328 Annual Members.

The total enrolled membership of the Society, as of December 31, 1920, is as follows:

Honorary Members.....	7
Fellows	35
Corresponding Members	8
Benefactors	5
Founders in Perpetuity.....	15
Founders	12
Associate Founders.....	9
Patrons	32
Life Members	336
Sustaining Members	12
Annual Members	2,178
Ladies' Auxiliary.....	35
Total	2,684

After deducting the resignations and deaths, the net results of the year is a gain of 296 members over the year 1919.

ATTENDANCE.

The number of visitors at the two institutions for 1920, as compared with 1919, is as follows:

	Park	Aquarium
1920	2,250,177	1,994,548
1919	2,035,859	1,850,973
Increase	214,318	143,575

Total for 1920, 4,244,725.

The heavy annual increases in attendance at the Zoological Park and the Aquarium are very gratifying evidence of the increasing popularity of these institutions. The attendance at the Park and Aquarium has reached proportions never previously attained and is larger than that of any kindred institutions in the country and, perhaps, in the world.

COLLECTIONS AT THE PARK.

A census of the animals in the Zoological Park, taken January 1, 1921, is as follows:

	January 1, 1921		January 1, 1920	
	<i>Species</i>	<i>Specimens</i>	<i>Species</i>	<i>Specimens</i>
Mammals	196	629	173	648
Birds	797	2,412	726	2,562
Reptiles	85	465	81	548
	<hr/>	<hr/>	<hr/>	<hr/>
	1,078	3,506	980	3,758

As compared with January 1, 1920, this census shows an increase of 96 species and a decrease of 252 specimens.

The health of the animals continues good, and the only important losses during 1920, including a number of animals destroyed on account of old age and disabilities, were as follows:

Mammals: Eighteen deer, two sloth bears, one antelope, three bison, two sea lions, two capybaras, one bear, one chimpanzee (imm.), one blessbok, one lechwe waterbuck, one bactrian camel, two Rocky Mountain sheep, one koala, one panda.

Birds: Two emus, two storks, four cranes, two swans, one black-footed penguin, two vultures, one kaka, one cassowary, one lesser bird of paradise, one satin bower bird, one cock-of-the-rock, one North African ostrich.

The important acquisitions were:

Mammals: One blessbok, one capybara, two California sea lions, one giant ant-eater, three mule deer, two African hogs, one rufus kangaroo, one red kangaroo, one mandrill, one kaola, two Tasmanian devils, three wombats, two Bernard's kangaroos, one albino fox, one sable antelope, one kudu, one lechwe waterbuck, two springbucks, one gnu, one blessbok, one mountain zebra, two Chapman-Burchell zebras, two Rocky Mountain sheep, two white-fronted musk-oxen.

Birds: One stork, one Imperial Amazon parrot, two keas, one turquoise parrakeet, one Princess Alexandra's parrakeet, one Barraband parrakeet, two black cockatoos, one gang-gang cockatoo, four blue birds of paradise, two rifle birds, one kagu, one New Guinea kingfisher, two ocellated megapodes, two Australian cranes, one Macklot pitta, one Bennett's cassowary, one

wreath-billed hornbill, two Reinwardt scrub-fowls, one manu-code.

During the year the Zoological Park received from abroad many important accessions of mammals, birds and reptiles. Besides receipts from miscellaneous sources, three large collections arrived from England, South Africa and Australia. These important accessions had the effect of filling nearly all the hitherto empty cages at the Zoological Park. Full statements regarding these accessions will appear in the *Zoological Society Bulletin* and in the report of the Director of the Zoological Park in this volume.

COLLECTIONS AT THE AQUARIUM.

	January 1, 1921		January 1, 1920	
	<i>Species</i>	<i>Specimens</i>	<i>Species</i>	<i>Specimens</i>
Fishes	138	3,525	120	2,704
Reptiles	23	253	23	131
Amphibians	7	38	8	60
Invertebrates	20	2,893	15	1,157
Mammals	2	6	2	3
	<hr/>	<hr/>	<hr/>	<hr/>
	190	6,715	168	4,055

Compared with January 1, 1920, this census shows an increase of twelve species and 2,660 specimens.

Plans for the alterations of the Aquarium, by transferring the boilers to the front of the building, are approaching completion.

The emergency repairs to the roof of the Aquarium and to the boilers have been completed and will be paid for by the City.

During the year, eleven of the glass-fronted exhibition tanks on the main floor of the Aquarium were enlarged by the Society at a cost of \$2,440, thus completing this important improvement of the main floor tanks.

The well-boat *Seahorse*, built and equipped by the Society at a cost of \$4,334.25, was in service about two days a week from May 29 to November 8, 1920. The boat made twenty-six trips, collecting over 3,000 fishes of sixty different species, besides many invertebrates, useful both as exhibits and as fish food.

ALTERATIONS AT THE AQUARIUM.

In order to provide sufficient space for the increase of the collections at the Aquarium resulting from use of the collecting boat, the Society authorized the enlargement of eleven tanks to more than double their former capacity. The cost of this structural alteration to the Aquarium was \$2,440.

The deterioration of the roof of the Aquarium became so marked that in the autumn of 1920 the Society was obliged to take immediate action and make emergency repairs. These repairs were completed before the close of the year at a total cost of \$900.

At the same time, defects in one of the boilers at the Aquarium developed and called for immediate repair at the cost of \$500.

Both of these emergency items were paid for by the Society and an application has been made to the Board of Estimate and Apportionment for repayment by special revenue bonds.

Being unable to obtain action from the Board of Estimate and Apportionment for the structural alterations needed at the Aquarium, the Society decided to proceed at its own expense with the removal of the boilers to the front of the building and to use the space vacated for additional tanks. The work involved calls for an expenditure of about \$75,000, and plans have been prepared by Mr. H. DeB. Parsons, which are nearly completed. The contract for this alteration will be awarded by the Society in the near future so that the work itself can be done during the summer.

Application will be made to the City for corporate stock in a similar amount for the purpose of providing a new roof and for the construction of an additional story for office space and scientific research.

MAINTENANCE.

Park.—The sum of \$250,544 was provided by the City for the maintenance of the Zoological Park during the year 1920. While this was a substantial increase over the amount allowed for the preceding year and while it provided in most cases for a proper increase in small salaries, no provision was made for increasing the salaries of the staff officers, whose pay had remained

stationary for nearly fifteen years. At the same time, the increase during 1920 in the cost of fuel and other supplies created a serious deficit.

In view of these two conditions the Society was compelled to step in and save both situations, raising a special fund of about \$18,000, with which to increase the pay of the officers, and purchase the required balance of supplies.

In the budget for 1921, an application has been made to the Board of Estimate and Apportionment for additional funds with which to meet imperative needs. The strict rules laid down by the City authorities make the administration of city funds sometimes very difficult.

For 1921 the City has provided a fund for the Zoological Park maintenance of \$282,400, which we hope may prove sufficient.

Aquarium.—The situation at the Aquarium is much the same as that of the Park. The sum of \$61,486 was provided for the maintenance at the Aquarium for the year 1920 and proved insufficient because of the unexpected increase in the cost of supplies, especially of coal.

Application also has been made for special revenue bonds to meet this increased cost, which, if granted, will enable the Aquarium to keep within its allowance for 1920. The increased costs of coal and other supplies were taken into consideration by the City in providing a maintenance for the Aquarium for 1921, and the Society has been given for this purpose the sum of \$65,653.

SPECIAL SUBSCRIPTION.

A special subscription was raised among the Board of Managers to meet the anticipated deficit in the Aquarium and Park Maintenance Funds and in the Income Account.

The following subscriptions for this purpose have been received:

George F. Baker.....	\$1,000.00
George D. Pratt.....	1,000.00
Percy A. Rockefeller.....	1,000.00

Mortimer L. Schiff.....	1,000.00
Emerson M. McMillin.....	1,000.00
George J. Gould.....	1,000.00
Coleman duPont	1,000.00
E. C. Converse.....	1,000.00
Edward S. Harkness.....	1,000.00
A. Barton Hepburn.....	1,000.00
C. Ledyard Blair.....	500.00
Robert S. Brewster.....	500.00
Lispenard Stewart	500.00
Cleveland H. Dodge.....	500.00
Chas. F. Dieterich.....	500.00
Wm. B. Osgood Field.....	250.00
Edwin Thorne	100.00
William Woodward.....	100.00
George G. Clark.....	100.00
Total	<hr/> \$13,050.00

The Executive Committee desire to take this opportunity to express their appreciation for these generous subscriptions.

At the present writing the Executive Committee believe that the maintenance allowance provided for both the Park and Aquarium for 1921 will cover the cost of supplies and nearly all of the salaries. Some of the officials of the Society are, however, not adequately recompensed for their long continued service and the great skill used by them in keeping their institutions at the present high standard of excellence.

It was no small task to bring the Park and Aquarium through the trying years of the war, and to keep the collections properly supplied with food and heat, and the Society owes a debt of gratitude to those who achieved these results.

FINANCES.

Bequest of Mrs. Russell Sage.—On May 14, 1920, the Executors of the Sage Estate turned over to the Society, in cash and securities at market value, the sum of \$500,000, less the advancements with interest previously made to the Society, amounting to \$10,926.67.

The cash was invested in securities under the direction of the Finance Committee and a portion of the securities were sold and reinvested, all of which appears at length in the Treasurer's Report.

It is believed that a second installment on account of the Sage bequest will be made during the spring of 1921.

A letter of thanks, expressing the appreciation of the Society to the Executors of the Estate of Margaret Olivia Sage, was written by the Executive Committee, and it was determined that the improvement of the Aquarium should be in the form of a memorial to this great benefactress of science.

The following were the balances to the credit of the Society's various accounts on January 1, 1921:

Income Account		\$9,295.14
Sage Endowment Fund.....		1,837.54
Endowment Fund (Cash uninvested).....		2,622.56
Animal Fund.....		38,235.73
Special Trust Funds:		
Cadwalader Animal Fund.....	\$1,696.58	
Stokes Bird Fund.....	358.54	2,055.12
		<hr/>
Improvement and Repair Fund.....		11,462.33
Special Funds:		
Publication Fund	1,896.02	
Tropical Research Fund.....	679.67	
Art Gallery Fund.....	5,082.91	
Heads and Horns Building Fund....	1,661.98	
Library Fund	38.54	
Wild Life Fund.....	1,065.63	
National Collection Heads and Horns	155.03	10,579.78
		<hr/>
		\$76,088.20

INCOME ACCOUNT.

The Income Account shows a balance of over \$9,000. This was solely due to the inclusion in this account of the subscriptions of the Managers for the Special Maintenance for 1920.

The constant overdrafts in the other funds of the Society have to be met by appropriations from the General Income Account, and even the Pension Fund is maintained only by the contribution from the Income Account of \$3,665 annually.

This fund is now, and always has been, the weakest of all the Society's accounts, because upon it falls the burden of emergencies. Its pitifully small size cripples the activities of the Society in its office force, and especially in the matter of campaigning for new members. The Society needs at least \$2,000,000 in its General Endowment Fund, independently of the Sage Endowment Fund, in order that it may have an income sufficient to maintain its regular work. Even this amount would leave only a narrow margin for the support of outside enterprises or for the expansion of its scientific work, either in original research work or in publications.

The Executive Committee cannot urge too strongly upon the members the importance of increasing the Endowment Fund of the Society. It has been a disappointment to the Committee to find the Society so often overlooked in the bequests of decedents who have been more than generous in their contributions to similar institutions, which have been longer in the field and consequently have accumulated far larger funds.

ANIMAL FUND.

The amount to the credit of the Animal Fund at the end of the year was \$38,235.73. During the year, the Society donated to the London Zoological Gardens a collection of birds and mammals to help in the re-establishment of that institution, amounting to 234 birds, representing 103 species, and 9 mammals.

CADWALADER ANIMAL FUND.

The balance on hand in this fund was \$1,696.58. During the year \$1,248.95 were appropriated from this fund for the expense of shipping the gifts of the Society to London.

STOKES BIRD FUND.

The use of this fund is limited to the protection of bird life, and the only expenditures made from it during the year was a

subscription of \$500 to the French National League for the Protection of Birds. It is well known that the protection of birds in the south of Europe is most unsatisfactory, and the bird protectors of France are making vigorous efforts to establish their work on a thoroughly efficient basis.

ENDOWMENT FUND.

The General Endowment Fund of the Society increased during the year and is \$402,082.21, inclusive of securities and cash uninvested. It was enlarged during the year by the addition of 15 Life Members and subscriptions as follows:

Mrs. Wm. B. Osgood Field.....	\$250.00
Mrs. Finley J. Shepard.....	100.00
Miss Emily Buch.....	5.00
Estate of John Leyden.....	194.75
<hr/>	
Total	\$549.75

Your Committee is constantly embarrassed by the meagerness of its General Endowment Fund. The opportunities for the Society's usefulness in the field for the conservation of wild life is expanding and the demand on the Society for scientific research work and publication is urgent.

No similar organization accomplishes so much with such inadequate means and with such a small overhead charge.

The income from the Sage Estate came just in time to tide us over the crisis occasioned by the war, but even with that, the need of a large endowment is still the most pressing problem your Committee has to face.

ART GALLERY FUND.

A large painting of an American wapiti, by Carl Rungius, was added to the collection during the year, and a painting of American flamingoes ordered of Louis Agassiz Fuertes is nearing completion.

There is a balance on hand in this fund of \$5,082.91. The Committee intend to make every effort to complete the gallery of North American animals in time to have the pictures ready

for exhibition as soon as wall space in the galleries of the Administration Building is made available by the removal of the Heads and Horns collection to the proposed new Museum.

It is the purpose of your Committee to ultimately have a complete Gallery of all the large North American animals in their native surroundings. More than half of the species already are represented by paintings.

In the meantime the smaller mammals and birds will be painted in the order of their increasing scarcity, and the animals most threatened by extermination will receive immediate attention. In the case of the fur-bearing animals, this is a matter of pressing importance.

To complete the collection at least \$10,000 will be needed, and subscriptions for this purpose will be welcome.

A collection of early American hunting prints, inclusive of hunting and bird shooting, is being assembled by the Art Committee, and Dr. George Bird Grinnell of the Board of Managers has succeeded in gathering many interesting early prints that will be placed on exhibition as soon as space is available.

During the year important moving photographic records of animals at the Zoological Park have been made by Raymond L. Ditmars, Curator of Reptiles.

These pictures were shown to the Managers and members at the various meetings of the Society. Through the use of some of them in the theaters throughout the country the interest in the Zoological Park has been greatly fostered. In this way we have secured our only permanent records of certain rare animals, which lived only a short time at the Park, such as the koala, an extraordinary arboreal marsupial, which died a few days after its arrival from Australia.

The Executive Committee intend to encourage the development of its photographic department as soon as funds are available for such purposes.

TROPICAL RESEARCH STATION.

The Tropical Research Station was reopened in April, 1920, under the charge of its Director, Mr. William Beebe. The reports received from time to time from Mr. Beebe indicate a very

active and successful season, with a large number of visitors to the station.

The Research Station is acquiring a great reputation, which in turn reacts most favorably on the fame of the Society. The work of the Station is more particularly described in the report for 1920 by Director Beebe.

The subscriptions to the Tropical Research Station for the past year were as follows:

Edward S. Harkness.....	\$1,000.00
Col. Anthony R. Kuser.....	1,000.00
E. C. Converse.....	1,000.00
A. Barton Hepburn.....	1,000.00
George J. Gould.....	1,000.00
Mortimer L. Schiff.....	1,000.00
Cleveland H. Dodge.....	500.00
C. Ledyard Blair.....	500.00
Total	<hr/> \$7,000.00

As the Station will be kept open longer this year, at least \$10,000 will be needed for the coming year.

PHEASANT MONOGRAPH.

The second volume of the Pheasant Monograph will be published during the spring of 1921, and thereafter Volumes III and IV will appear in quick succession.

Sales in America of this magnificent work up to January 1, 1921, amounted to 214 copies. The conditions imposed by the war having been removed, it is believed that the completion of the final volumes of this Monograph will not be further delayed.

NATIONAL COLLECTION OF HEADS AND HORNS.

The approaching construction of the Heads and Horns Museum has led to further activities in increasing this collection.

The most notable accession of the year was a world's-first-record horns of the African Buffalo. The collection requires, and must have as soon as possible, several more heads of giraffe, rhinoceros, elephants and a number of other species.

HEADS AND HORNS MUSEUM.

Plans and specifications for this building have been prepared by Henry D. Whitfield, Architect, and were submitted to competitive bidding. The estimates, however, were so high that the Society has postponed the erection of this Museum until building costs decline.

On account of the increased cost of building, at least \$40,000 of additional subscriptions must be secured to add to the \$100,000 now on hand, and four subscriptions of \$10,000 each are greatly needed. The subscriptions to this fund are as follows:

Mrs. Russell Sage.....	\$10,000.00
Mrs. Frederick F. Thompson.....	10,000.00
Estate of John D. Archbold.....	10,000.00
Jacob H. Schiff.....	10,000.00
George F. Baker.....	10,000.00
Mrs. Andrew Carnegie.....	10,000.00
Andrew Carnegie	10,000.00
Edmund C. Converse.....	10,000.00
Samuel Thorne (In Memoriam) ..	10,000.00
Guaranteed by individual mem- bers of the Executive Committee	10,000.00
	<hr/>
	\$100,000.00

WILD LIFE PROTECTION.

The law removing protection from female deer in the Adirondacks has been repealed, owing to the decimation of the herds and also the loss of human life which resulted from it. The result of the doe-killing law was foretold by the representative of the Society, and the law never should have been placed upon the statute books. The results were so disastrous that there is no danger of its restoration.

The Society paid a reward of \$100 to George Tonkin, United States Game Warden of Boise, Idaho, and a reward of \$100 to Sheriff E. E. Woodcock of Lakeview, Oregon, for having arrested and secured the conviction of two violators of the game law of Oregon for killing prong-horned antelope. The arrests and the conviction of these men were of great importance to the protection of the few remaining antelope in southeastern Oregon, and the Society feel that the rewards were well earned.

PUBLICATION FUND.

The balance on hand on January 1, 1921, was \$1,896.02. The enormous cost of printing has checked the publication of the Society during the year, but a new Aquarium Guide Book was made available. It was prepared by the Director of the Aquarium after years of study, and contains 170 pages of text and 160 pages of illustrations.

The regular publications of the Society, while somewhat delayed, appeared during the year as follows:

The Twenty-fourth Annual Report of the Society for the year 1919.

The six Bulletins for the months of January, March, May, July, September and November. One of these Bulletins was the White Rhinoceros number, containing an article by Herbert Lang, Assistant Curator of Mammalogy, American Museum of Natural History, which virtually forms a popular monograph on the White Rhinoceros and is of great Zoological value.

Of Zoologica Vol. II, Nos. 10 and 11 were published.

LIBRARY FUND.

While the Library Fund is able to purchase from time to time the new zoological publications that are most important to the practical work of the Zoological Park, it is highly desirable that as soon as funds become available, extensive purchases of books may be made to bring the Library up to a standard that will be in keeping with the general work of the Society.

A special appeal has been made to the members of the Society for books or for money to purchase books for this purpose. The Fund requires at least \$5,000 in order that the Society's Library may be brought up to date.

IMPROVEMENT AND REPAIRS.

The difficulty of obtaining labor and the necessity for economizing during the war led to the accumulation of many needed repairs both to buildings and to walks and roads.

During the year, the following items of work have been done and charged against this Fund: New Blackbirds' cage erected; Reptile House roof repaired; new drainage for Elephant House basement; new boiler for Lion House; upper bear dens repaired; sixteen new Parrot Cages erected; Eagles' Aviary repaired; cage floors of Mammal House repaired, and extensive walk repairs.

CARNEGIE PENSION FUND.

Important and valuable as this Fund is to the Society as a safeguard and protection to its employees, who have long rendered valuable service at inadequate salaries, it is nevertheless a source of continuous drain upon the Income Account, because it requires an annual contribution of \$3,665.

The Carnegie Foundation appears to be unwilling to assist the Society in this matter, although the Fund was established by the late Andrew Carnegie and bears his name.

MEDICAL DEPARTMENT.

The Medical Research Department under Dr. George S. Huntington has continued to make use of the material received from our collections. The skins and skeletons were turned over to the American Museum of Natural History, so that it now is safe to say that there is an increasing scientific use made of the material available at the Park.

If the Society had the funds, a Biological Laboratory could be constructed at the Park and many valuable observations could be made upon the living collections and upon the soft parts of their anatomies when they die.

CONSERVATION.

The most serious matter of conservation that has engaged the attention of the Society during the year has been the protection of National Parks. There has been powerful effort made to exploit the National Parks for water power and irrigation.

The Smith Bill, which would have destroyed the southwestern corner of Yellowstone Park, which is almost the last stand of the moose in the West, was defeated with difficulty.



POLAR BEAR, "SILVER KING"

A striking photograph of one of the most perfect specimens of the polar bear that the Society ever exhibited.

Another project is on foot to raise the level of Yellowstone Lake, which will flood the upper reaches of the Yellowstone River. Similar attacks are being made on Roosevelt Park in the West. These attacks on National Parks are based upon the unfortunate precedent established by the Government in sacrificing the Hetch-Hetchy Valley to commercial exploitation for the benefit of San Francisco.

The forces of conservation are thoroughly aroused to the danger, but funds will be required to meet these continuous assaults and the New York Zoological Society should assist in every way possible. One of the Managers of our Society, Dr. George Bird Grinnell, is actively engaged in this work.

BRONX PARKWAY COMMISSION.

Work on the Bronx Parkway has made great headway during the year. The section immediately north of Bronx Park has been transformed from a collection of rock piles and tenements into what will be one of the most beautiful parks in the city.

Members of the Society are urged to view the very interesting operation of the dredges and steam shovels before old conditions are obliterated beyond recognition.

RECEPTIONS.

Annual Dinner.—The Twelfth Annual Dinner to the Board of Managers was given through the courtesy of Mr. Madison Grant at the Knickerbocker Club, on Monday, December 27, 1920.

Reception at the Aquarium.—This was held on Monday evening, June 7, 1920. At the Zoological Park Ladies' and Members' day was observed on May 20, 1920. It was preceded by the Spring Meeting of the Board at the Administration Building.

MEMORANDUM OF MEETINGS.

1921-22.

Annual Meeting of the Society:

JANUARY 10, 1922, 8:30 P. M.

Hotel Waldorf-Astoria.

Meetings, Board of Managers.

January 19, 1922, 3:00 P. M.

May 19, 1921, 2:30 P. M.

Annual Meeting,

Park Meeting,

Down Town Association.

Preceded by Luncheon at 1:30 P. M.

Aquarium Reception.

October 17, 1921.

Annual Dinner,
December 27, 1921.

Executive Committee Meetings.January 13,
February 10,
March 10,
April 14,May 12,
June 9,
October 13,
November 10,

December 8.

Members' Day and Ladies' Day at the Zoological Park:

May 19, 1921, 3:00 P. M.

AUDITING.

The Auditors of the Society, Messrs. Marwick, Mitchell, Peat & Company, have audited and found correct the accounts of the Society, including the system of receiving and paying for supplies at the Park and at the Aquarium.

The Auditors' report, as well as that of the Auditing Committee, follows the report of the Treasurer.

ACKNOWLEDGEMENTS.

The Directors of the Park and Aquarium and their respective staffs have done everything possible to facilitate the work in their respective institutions and to maintain them at a high standard of efficiency, in spite of the discouragements of the year. The Committee desire to acknowledge their zeal and faithfulness.

Respectfully submitted,

MADISON GRANT, *Chairman*,

PERCY R. PYNE,

WILLIAM WHITE NILES,

WM. PIERSON HAMILTON,

FRANK R. STURGIS,

LISPENARD STEWART,

WATSON B. DICKERMAN,

ANTHONY R. KUSER,

A. BARTON HEPBURN,

HENRY FAIRFIELD OSBORN, *Ex-Officio*.

Resolutions
of the
Executive Committee of the Board of Managers
of the
New York Zoological Society

Hon. Levi P. Morton

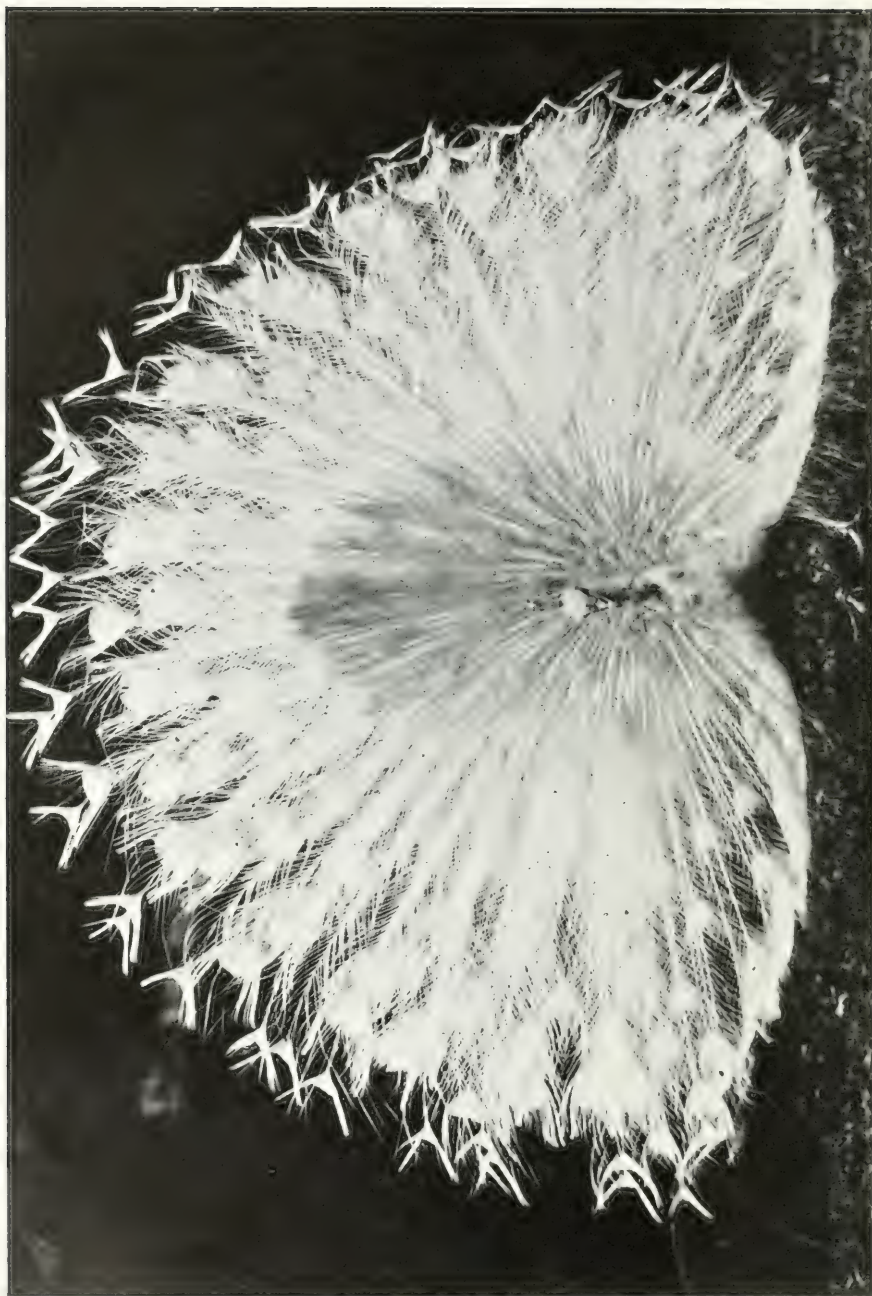
The Executive Committee of the New York Zoological Society deeply regret to announce the death of their associate, HON. LEVI P. MORTON, a member of the class of 1921.

Mr. Morton, a Founder in Perpetuity, was president of the New York Zoological Society from 1897 to 1908 and a member of the Board of Managers since its organization.

Jacob H. Schiff

The Executive Committee also deeply regret to announce the death of their associate, Jacob H. Schiff.

Mr. Schiff became a member of the Society in 1897, was elected to the Board of Managers of the class of 1901, and at the time of his death was a benefactor.



ALBINO INDIAN PEACOCK

REPORT OF
THE LADIES' AUXILIARY
TO THE BOARD OF MANAGERS

A BUSINESS meeting of the Ladies' Auxiliary of the New York Zoological Society was held on December 9, 1920, at the beautiful office of Mr. Thomas Hastings, where, for many years, the ladies have enjoyed his courteous hospitality, in permitting them to hold their reunions in so convenient and central a situation.

At the meeting, reports from the various committees showed good activity during the year 1920. Membership in the Zoological Society increased, sums were added to the Endowment Fund, and during the summer nearly 3,000 children were treated to lunch, carfare, and guidance to the wonders of the Zoological Park. Through the generosity of the ladies, which made this work possible, the children spent the heated midsummer days in the Park, instead of in the sweltering asphalt streets of the lower East Side.

Children of members and their friends have their own committee, known as the Junior Auxiliary of the New York Zoological Society. In May, 1918, the children collected and sent \$500 to Director Hornaday to purchase three ostriches for the Society, and in August, 1920, they sent \$600 more to the Director, with which he purchased a fine Burchell's zebra. The interest of these children is due largely to the personality of Director Hornaday, who is untiring in his enthusiasm, and who knows how to arouse the same enthusiasm in the young.

A most delightful midwinter lecture was held at the residence of Mrs. Vanderbilt, 2 West 58th Street, on February 5, 1920, at which, after expressing to Mrs. Vanderbilt the appreciation of the Ladies' Auxiliary, President Osborn of the Society introduced William Beebe, Director of the Tropical Research

Station, who spoke at length on "Jungle Life and its Opportunities for Scientific Investigation." He gave a most vivid description of the South American jungle and its living inhabitants. The lecture was beautifully illustrated by pictures in color, so real that the presentation seemed the jungle itself. Despite an unusually severe storm, a large audience was present, and interest in the Society's activities was thus extended.

The annual Spring Garden Party was held at the Zoological Park on May 20. It was a rare, sparkling spring day, and New Yorkers, with their usual love and appreciation of the beautiful, attended in large numbers, and with real delight basked in the sunshine, visited the animals—all rejoicing in spring—walked through the lovely woods, and admired the exquisite spring foliage of the flowers and shrubs. Music on the lawn, and a few military uniforms added a fine touch to the scene, and it was a most delightful afternoon, all appreciating the glories of the Park.

Respectfully submitted,

MRS. H. FAIRFIELD OSBORN, *Chairman.*



MOUNTAIN ZEBRA

A very perfectly formed specimen of this species.

REPORT OF THE
DIRECTOR OF THE ZOOLOGICAL PARK
TO THE BOARD OF MANAGERS.

THE balance sheet of the general status of the Zoological Park for 1920 is a great improvement over that for 1919. The debit for financial and labor worriments is far overshadowed by the great accessions of new arrivals, the phenominally light death roll and the healthy condition of the collections. The labor shortages that have heavily handicapped the Department of Repair and Construction now are less serious, and very soon we will be able to secure the help that we need at the rates that we are able to pay.

In view of the heavy financial burdens that the city now is bearing and the new burdens of the Zoological Society on account of the maintenance of the Zoological Park, the old arrangement by which the gate receipts and net profits of all the privilege business go into the fund for the purchase of animals has become a most valuable means of Park support.

Notwithstanding the generous increase in our annual maintenance, the Society is obliged to play the part of a general stabilizing institution in salaries, materials, etc., and its annual contribution for sundries, not counting the purchase of animals, seems to have settled down at about \$18,000 per year.

ATTENDANCE.

The phenomenally high and steadily increasing attendance of visitors at the Park leaves no room for argument regarding the estimation in which that place is held by the public. The total increase for 1920 was 214,318, making the record-breaking annual total of 2,250,177. The proportion of school pupils and other children is perfectly satisfactory.

On the whole, our attendance figures afford, without a word of support, the best answer to the occasional printed denunciations of zoological gardens and parks in which an extra sensitive humanitarian occasionally indulges.

The attendance by months was as follows:

	1920	1919
January	47,024	69,298
February	37,485	84,221
March	112,658	118,798
April	187,748	192,839
May	366,024	255,597
June	241,995	297,285
July	299,409	220,004
August	259,831	263,135
September.....	288,666	226,015
October	239,941	133,742
November	92,096	131,650
December	77,300	43,275
	<hr/>	<hr/>
	2,250,177	2,035,859

OUR COLLECTIONS.

The first, the last and the greatest business of every zoological park is to collect and exhibit fine and rare wild animals, in healthy and happy conditions. Next comes the duty of enabling the greatest possible number of people to see them with comfort and satisfaction.

In comparison with these objects, all others are of secondary or tertiary or quaternary importance. The breeding of wild animals is extremely interesting, and the systematic study of them is fascinating, but both those ends must be subordinated to the main objects. We must not forget that the millions of visitors expect us to bring within their reach, and keep them constantly in view, choice representatives of the most beautiful and most interesting wild creatures of this vast earth. The metropolitan zoological park that fails in the accomplishment of that only partially fulfills the main purpose for which it exists.

The war's stagnation of the wild animal market led to a universal drop in our exhibits. From 1916 to July, 1920, it was a steady fight against empty cages and corrals.

However, thanks to the ripening of seed sown in previous years, the year 1920 brought an incoming tide of specimens that has filled some of our Zoological Park collection units full to the point of actual overflow. On account of the new accessions, the collections that we sent to Antwerp, London, Pretoria and Johannesburg, in 1919 and 1920, have not been missed.

Today our Park is well dotted over with the cheerful scarlet label which says "Recent Accession."

During 1920, there were three great arrivals. Curator Crandall started the inflow in July, with the collection of about 500 birds, mammals and reptiles that he worked hard to gather in England and on the continent. No sooner was that lot safely stowed away and the wreckage cleared than the *Chinese Prince* floated in from South Africa, having on her forward deck Mr. A. K. Haagner and an amazing collection of African antelopes, small mammals and birds and reptiles both great and small. There were ninety-six cages and crates—and the giraffe house merely counted "one."

And then came the steamer *Belle Buckle*, directly from Sydney, Australia, via the Panama Canal, bearing Ellis S. Joseph, most amazing of zoological collectors, with a collection of Australian birds and mammals of staggering proportions.

ANIMALS FOR THE FUTURE.

We are now reaching out into distant lands for certain large and highly desirable species of animals, some of which we never have possessed, and some that are desired to take the places of others that have lived and died in our possession. It is unnecessary to state our precise ambitions, but if some of our cherished plans prove successful, the year 1921 will be marked by some distinguished arrivals.

MAINTENANCE OF BUILDINGS AND OTHER INSTALLATIONS.

The great number of buildings, of proportions great, medium and small, of large dens and aviaries, of fenced enclosures, of

walks, roads and other ground improvements, render the maintenance of all these works a serious burden. The wear and tear on our plant by the animals and by visitors is exceedingly severe, and for this reason our permanent improvements were originally made as substantial as it is possible to make them. This precaution has served us in good stead. The total amount of repairs thus far made on our great plant has been exceedingly small. We have endeavored to have our repairs keep pace with natural deterioration, and up to date we have so far succeeded that there has been no great general lapse from acceptable standards.

It is a well known fact that all exposed steel work in the peculiar climate of New York is constantly and very severely attacked by rust, and this condition has been met by extra diligence on the part of Chief Constructor Merkel and his force in rust preventive work.

The arrangement by which the gate receipts were made available to the Zoological Society for the animal purchase fund has borne most excellent fruit, but not of the precise kind that originally was intended. Several years ago the Society found it necessary to devote this fund to repairs and other improvements, and now it is annually and regularly dedicated to that line of work. It is most fortunate that with this fund in hand the Society is ready to begin instantly repairs that are suddenly thrust upon us by circumstances beyond our control. Were it otherwise, we often would find ourselves in dire extremities for emergency repair funds. While the Animal Fund loses this benefit, it is of far greater importance that the gate receipts should be expended as they now are.

IMPROVEMENT OF INCOMES.

The members of the Zoological Park force are deeply appreciative of the efforts that have been made by the Finance Department of the City of New York to increase the salaries of all city employees to a living basis. In the increases that have been made, the employees of the Zoological Park have participated on the same basis as other city employees, and the tension that existed in 1919 has been greatly diminished. The good will of the taxpayers of New York and of the Board of Estimate thus manifested toward the workers in city employ should be gratefully remembered by all.

QUALITY OF SERVICE

The services rendered by the members of the Zoological Park force continue to reveal a high order of merit. The giving of an order is in itself an assurance that the work called for will be promptly, cheerfully and skilfully performed. Here the standard of service is such that incompetents who enter soon drop out, or are dropped. We have lost quite a number of excellent employees through conditions beyond our control, the most notable for 1920 being Mrs. Ethel Sutcliffe Meyer and Mrs. Clara Reiss Newman.

After January 1, 1921, each member of our uniformed force who has served more than five years will wear a gold bar chevron for each five years of service in the Zoological Park.

SPECIAL POLICE FOR PARKS.

In the winter of 1920 Park Commissioner Joseph P. Hennessy, of the Bronx, caused to be drafted, and with the full approval of the Park Board and Police Commissioner Enright, introduced in the legislature at Albany a bill to provide for special park police. On account of the pressure of other matters, this highly desirable and important measure was not successfully pressed to a conclusion; but it is to be hoped that in the near future the bill can be passed. The rapidly increasing population of New York City is also rapidly increasing in disorderly tendencies in public parks, and a far better system of park protection now has become imperatively necessary.

DEPARTMENT OF MAMMALS.

W. T. HORNADAY, Curator; R. L. DITMARS, Assistant Curator;
JOHN TOOMEY, Head Keeper.

Never since the opening of the Park has the Department of Mammals passed a more active or a more interesting year. These activities were due to arrivals and departures. The receipt of three large collections from abroad already has been noted in this report. The activities connected therewith were supplemented by the crating and shipping of a large collection of duplicate animals and animals specially purchased for exportation to the



MALE MUSK-OX

The Society recently has acquired two specimens of this interesting species.
Photograph by Elwin R. Sanborn.

Zoological Gardens of Pretoria and Johannesburg. We also sent to the London Zoological Gardens, by Keeper Bailey on his return trip, a number of animals that were specially desired by that institution. Finally, near the close of the year, two black bears were shipped to the Antwerp Zoo.

During the early part of the year the Assistant Curator of the Department of Mammals made a number of hand-prints of the primates, at the request of the Galton Society. These were filed at the office of Dr. Gregory, in the American Museum of Natural History.

A new series of heavy, sheet-iron labels, with hand-painted pictures, was prepared for the Bear Dens.

On April 5, 1920, a new time schedule was experimentally undertaken by the keepers of the Mammal, Bird and Reptile Departments. Under this schedule the men remain off a full day each week, in place of half a day, as in former years.

Two female giraffes were deposited on April 28, 1920. These were loaned by the Ringling Bros. and Barnum and Bailey Show. They are, respectively, a Nubian giraffe, *Giraffa camelopardalis*, born at Bridgeport, Connecticut, on January 15, 1910, and now weighing 1,335 pounds, and a Masai Giraffe, *G. tippelskirchi*, born in British East Africa in 1911 and now weighing 865 pounds. The larger specimen is about thirteen feet high.

On May 5, 1920, the American Society of Mammalogists held a meeting in the Zoological Park, were entertained by the officers and escorted through the collections.

For the first time in a number of years a large animal escaped from its cage, and from the Park. This transgression happened on May 21, 1920, and the culprit was a full-grown black bear from Anticosti Island, Gulf of St. Lawrence. Through some feat of abnormal dexterity, the animal managed to swing over the overhang bars of the Bear Dens at night. It was located by early morning and as there was little chance of driving the animal into a cage, it was immediately shot to prevent danger of further wandering. The escape of this bear during the night was immediately detected and reported by the watchman on duty. The pursuit of the animal at daybreak and its final destruction were accomplished under the able direction of Mr. Hermann W. Merkel, Chief Forester.

On May 28, 1920, the following animals were crated and shipped to London: 2 white-tailed deer, 2 raccoons, 2 timber wolves, 2 Canadian porcupines and 2 opossums.

The Washington Irving High School was furnished, as has been the custom during several years, with a series of mammals, birds and reptiles for its Zoological Room. These animals are returned to the Park with the beginning of each vacation period, then sent back to the school with the re-opening in the autumn. One of our keepers is sent weekly to the school to see that the series of specimens remains in good condition.

On September 17, 1920, Mr. A. K. Haagner, Director of the National Zoological Gardens of South Africa, at Pretoria, delivered a lecture in the Administration Building at the Park. His remarks related to zoological gardens and game conditions in Africa. This lecture was illustrated with stereoptican slides and motion pictures and among the latter were scenes of an elephant hunt.

On October 7, 1920, the following animals were shipped on the steamship *Chinese Prince*, for Pretoria and Johannesburg, in charge of keeper Fritz Schluter, who accompanied the shipment brought to us by Mr. Haagner: 1 American bison, 1 aoudad, 1 Himalayan tahr, 3 American wapiti, 1 hog deer, 2 axis deer, 1 macaque monkey, 2 rhesus monkeys, 2 black spider monkeys, 2 Canadian porcupines, 2 raccoons, 1 black bear and 1 coati mundi.

Several interesting mammals were received from the Society's Tropical Research Station in South America. Among these were a large two-toed sloth, a red howler monkey and a golden agouti.

The following are the more important donations received during 1920: 1 black spider monkey, 1 pig-tailed monkey, 1 lioness, 1 puma, 1 coyote, 2 red foxes, 1 South American fox, 1 albino woodchuck, 1 black woodchuck, 1 mule deer and a male and female Rocky Mountain sheep.

Following are the births in the Park during 1920:

1 Chimpanzee	2 Himalayan Tahr
2 Syrian Bears	1 Mouflon
4 Fallow Deer	2 Aoudad
4 Red Deer	1 Canadian Porcupine
5 Axis Deer	1 Sea Lion

2 White-tailed Deer	1 Black-faced Kangaroo
1 Hog Deer	1 Woodward Kangaroo
2 Barasingha Deer	2 Ring-tailed Wallabies
1 Sika Deer	1 Rufus-necked Wallaby
3 American Bison	1 Yak
1 Siberian Camel	

DEATHS AMONG THE MAMMALS.

The following important specimens were lost during the past year: a sloth bear fell into the tank and was drowned. A female Eld's deer broke her leg and was destroyed. Several hoofed animals died from old age. Among these were a female Indian antelope that had been on exhibition over a period of sixteen years. A female Eld's deer, on exhibition during a similar period, died from old age. Several old bison died during the year, or were mercifully destroyed. One of these had been on exhibition for nineteen years. At the Antelope House we lost a bllessbok and a lechwe waterbuck—one from old age, and the latter from an injury which resulted in an infection of a hind leg, when the animal was chloroformed. An old Rocky Mountain sheep, on exhibition a number of years at the Zebra House, died during the latter part of the year. A younger specimen of the same species succumbed to disease. A young Siberian camel, born in the Park, developed a condition of paralysis and was chloroformed. The chimpanzee baby that was born in the Primate House never learned to nurse, and survived only eight days.

A census of the collections of mammals compiled on January 1, 1921, is as follows:

	<i>Species</i>	<i>Specimens</i>
Marsupialia	23	67
Edentata	3	3
Carnivora	49	98
Pinnipedia.....	1	3
Rodentia	23	156
Primates	33	64
Artiodactyla (Even-toed Ungulates) ..	49	216
Perissodactyla (Odd-toed Ungulates) ..	12	19
Proboscidea	2	2
Hyracoidea	1	1
Total	196	629

DEPARTMENT OF BIRDS.

LEE S. CRANDALL, Curator; WILLIAM BEEBE, Honorary Curator;
SAMUEL STACEY, Head Keeper.

Our hopeful expectations for the rehabilitation of the live bird and animal trade during 1920 not having been realized, unusual efforts for the upkeep of the bird collections were necessary. Arrivals through the regular dealers' channels were very few and the specimens acquired by this means were almost negligible. The only dealer's shipment of any importance during the entire year was one received from India in May. This included many fine Asiatic species not exhibited in the Zoological Park since pre-war days.

The situation being rather critical, and the English bird market fairly active, the Curator of Birds sailed for Europe in June, 1920, for the double purpose of securing what material might be available and inspecting the recuperating Zoological Gardens of England and the continent. Large African consignments, as well as some others, were then arriving in England, and about 500 specimens of mammals, birds and reptiles were secured. Through the friendly cooperation of the Zoological Gardens of London, they were safely transported to New York. The general market on the continent was found even more dormant than our own, but visits to the Gardens of Belgium and Holland showed the results of determined efforts to return to normal. A detailed account of the trip appeared in the January Bulletin.

In September, a large shipment arrived from Africa, in charge of Mr. A. K. Haagner, Director of the Zoological Gardens of Pretoria. Several fine species new to our collection were received, including a white-bellied stork (*Abdimia abdimi*), a white-headed sea eagle (*Haliaetus vocifer*) and a white-headed vulture (*Lophogyps occipitalis*), and many others.

Early in November, Mr. Ellis S. Joseph arrived with a splendid consignment of Australasian birds. Thirty-five species new to our collection were acquired, besides many others. Most important were the kaka (*Nestor meridionalis*), kea (*N. notabilis*), turquoisine parrakeet (*Neophema pulchella*), six-plumed bird of paradise (*Parotia sefilata*), the lovely and extremely rare Prince Rudolph's blue bird of paradise (*Paradisornis rudolphi*) and the magnificent rifle bird (*Craspedophora magnifica*).

The Tropical Research Station collected a number of birds, including two fine specimens of the cock-of-the-rock (*Rupicola rupicola*), giving us three individuals of this splendid species.

At the end of the report of the Director will be found a list of the more important arrivals during the year. A total of eighty species new to the collection was received, a number far greater than in any previous year since 1913.

On May 29, 1920, the Society sent a shipment to the Zoological Gardens of London, including 239 birds of 103 species. Keeper James Bailey, of the bird section, was sent from London to convey the consignment and landed it in London practically without loss.

On October 6, 1920, an exchange collection was sent to the Zoological Gardens of Pretoria, including forty-three birds of twenty-nine species. This consignment left on the steamer *Chinese Prince*, in care of Keeper Schluter of the Pretoria Gardens.

Two new installations were completed during the year. One is a new cage for blackbirds and grackles, a well-built dome, with background of concrete and stone. It occupies the former site of the old wooden-framed structures, which had become unsightly. The other is a series of twenty-eight individual parrot cages, arranged in three tiers, in the space in the parrot hall formerly occupied by cockatoos. These cages are now filled with the finest series of lorries, parrots and parrakeets ever possessed by the Society. Their completion has placed our parrot collection on a new footing, which we hope to be able to maintain.

Among the birds reared in the Park during the year several are worthy of special notice. The most interesting is a black vulture (*Catharista urubu urubu*), apparently the first record in captivity. The parents occupy a cage in the Eagles' Aviary. The female laid two eggs and hatched two young, but only one nestling was reared to maturity. During the height of the breeding season in the Flying Cage gull colony, our two pairs of lovely silver gulls (*Bruchigavia novæhollandiæ*) nested several times, but each time their eggs or young were destroyed by quarrelsome neighbors. However, after the other birds had left the rookery, a pair of silver gulls, more persistent than the others, nested again and this time reared two fine young birds. This certainly is the first record for America. Early in the year, a young

pair of emus laid and the male attended his incubation duties faithfully for about four weeks, when he gave up his vigil. The eggs promptly were placed in an incubator at the nursery and under the care of Mr. E. A. Costain, two young birds were hatched. One was deformed and soon died, but the other progressed well under Mr. Costain's care and when about one month old, was transferred to the Ostrich House. Here, with careful nursing by Keeper Snyder, it was safely reared, our first success with incubator emus.

One number of *Zoologica*, "Eclipse Plumage in Domestic Fowl," was prepared by the Curator and published on October 15, 1920, as Volume II, Number 2.

CENSUS OF BIRDS LIVING IN THE ZOOLOGICAL PARK.

January 1, 1921.

		<i>Species</i>	<i>Specimens</i>
Struthioniformes,	Ostriches	2	6
Casuariiformes,	Cassowaries and Emus..	3	10
Tinamiformes,	Tinamous	2	3
Galliformes,	Quail, Pheasants, etc...	71	193
Turniciformes,	Hemipodes.....	3	5
Columbiformes,	Pigeons and Doves.....	52	141
Ralliformes,	Rails and Gallinules....	17	34
Lariformes,	Gulls and Terns.....	14	54
Charadriiformes,	Plovers and Sandpipers..	11	26
Gruiformes,	Cranes, Seriemas, etc...	13	23
Ardeiformes,	Ibises, Storks and Herons	28	59
Palamedeiformes,	Screamers.....	2	2
Phoenicopteriformes,	Flamingoes	2	2
Anseriformes,	Swans, Geese and Ducks	65	376
Pelecaniformes,	Cormorants, Pelicans, etc	9	18
Cathartidiformes,	New World Vultures....	7	12
Accipitriformes,	Old World Vultures,		
	Hawks and Eagles....	22	33
Strigiformes,	Owls	10	23
Psittaciformes,	Parrots, etc.....	92	181
Coraciiformes,	Kingfishers, Hornbills,		
	etc.	7	16

		<i>Species</i>	<i>Specimens</i>
Cuculiformes,	Cuckoos and Touracos..	4	5
Scansoriformes,	Barbets and Toucans....	10	15
Piciformes,	Woodpeckers	2	7
Passeriformes,	Perching Birds	349	1178
		<hr/>	<hr/>
		797	2422

Summary: Orders, 24; Species, 797; Specimens, 2422.

ANATOMICAL MATERIAL.

L. S. CRANDALL, in Charge.

During the year, the distribution of anatomical and museum material has been carried on as follows:

	Mam- mals	Birds	Rep- tiles	Amphi- bians
American Museum of Natural History	78	71	5	....
Columbia University (Dr. Huntington)	62	....	....	....
Columbia University (Dr. MacCallum)	1	19	5	....
Columbia University (Dr. Tilney)....	....	6	....	....
Columbia University (Prof. Gregory)	....	2	....	....
Shared by American Museum and Dr. Huntington	19	....	....	....
Tropical Research Station.....	....	21	1	....
Shared by Tropical Research Station and Historical Department of Iowa..	....	12	....	....
Rockefeller Institute .....	....	....	10	1
Dr. J. E. Verdin.....	5	5	....	....
New York University.....	....	1	....	....
	<hr/>	<hr/>	<hr/>	<hr/>
	165	137	21	1
Total number of specimens distributed.....				324

DEPARTMENT OF REPTILES.

RAYMOND L. DITMARS, Curator; JOHN TOOMEY, Head Keeper.

There was considerable collecting work during the early part of the year 1920 that yielded excellent results in the number of specimens obtained and in observations for articles in the Society's publications. During the spring the Curator visited a

number of snake dens and noted the time of emergence, the breeding and the abundance of a number of species, secured suitable specimens for the collections, and in the case of dangerous species,—the rattlesnake and the copperhead snake,—made note of the possible increase and spread of such types.

In several instances, where the sides of mountains were found infested with rattlesnakes and copperhead snakes, which scatter over a considerable area after leaving the various hibernating shelters, it was thought advisable to warn and advise physicians in nearby rural communities and to supply them with tubes of anti-venomous serum and pamphlets relating to its use.

Head Keeper Toomey and Keeper Taggart made several trips into the Ramapo Mountains to obtain frogs, toads and tadpoles to feed the collections of reptiles, which for the past two years have eclipsed in interest and importance any exhibit in the Reptile House since the opening of the Park. During these trips our men carried large fish-cans and brought in several thousand tadpoles, with which we stocked all of the Park lakes. For a number of years, frogs have been almost extinct in the Zoological Park, and these tadpoles will go far toward remedying this condition and providing easily collected food for the reptiles. With the same end in view, the Curator shipped in several hundred leopard and green frogs from his vacation trip in the Berkshires.

As in former years, we are indebted to Mr. Arthur L. Gillam, of Flushing, Long Island, for specimens of rattlesnakes and copperhead snakes for our exhibit of the local reptiles.

Owing to depleted European zoological gardens, the Curator visited several rattlesnake dens in the Berkshires during his vacation trip, and shipped in a series of particularly large and brightly colored rattlesnakes. Some of these specimens were shipped on the *Chinese Prince* to the Zoological Gardens of Pretoria, South Africa, and others took the place of specimens that had been shipped to London.

In keeping with the splendid series of reptiles exhibited during the past year, the Reptile House cages were systematically overhauled by working on small sections and hence not greatly disturbing the order of the exhibits. The scenic backgrounds, painted in the rear of the cages by E. A. Costain, were carefully gone over and retouched during the early spring overhauling of the building. All of the illuminating fixtures of the Reptile

House, both in the exhibition halls and the keepers' passageways, were provided with high-power nitrogen lamps. The illumination of the building during dark, stormy days, or at night for purposes of feeding, has been greatly improved.

The scientific work of the Curator of Reptiles during the year has included the preparation of various articles for the Bulletin, the most important of these being a description of the recurrence of the seventeen-year "Locust" and numerous photographs showing incidents of this insect's emergence in the northeastern portion of the United States. Material has also been filed, from numerous notes, as the basis for scientific articles dealing with the habits of hibernation and occurrence of poisonous snakes in the eastern United States. Early in the year, the Curator began the preparation of motion pictures for exhibition at the Annual Meeting. These included careful portrayal of the rarer mammals, reptiles and amphibians which had arrived during 1920.

The following are the more important purchases during the year: 1 regal python (about 20 feet in length); 2 black-tailed pythons (respectively 16 and 12 feet in length); 9 diamond pythons, 1 rock python, 1 anaconda, 1 boa constrictor, 4 Indian rat snakes, 6 European vipers, 6 Pacific rattlesnakes, 13 blue-tongued lizards, 9 Cunningham skinks, 3 Gila monsters, 12 collared lizards, 6 iguanas, 11 spike-tailed lizards, 12 green lizards, 2 Ceylonese monitors, 3 African chameleons, 1 radiated tortoise, 2 leopard tortoises, 1 hinge-backed tortoise, 2 side-necked turtles, 2 Muhlenberg turtles, 1 Indian crocodile, 1 Senegal crocodile, 20 smooth-clawed frogs and 10 axolotls.

The most important addition to the collection in the Reptile House was the Australian lung fish, *Ceratodus fosteri*, which arrived on October 31, 1920. Another important addition was in the shape of three specimens of the rare and beautiful Florida tree toad, *Hyla gratiosa*.

Director Beebe shipped a series of interesting reptiles from the Zoological Society's Tropical Research Station in South America. Among them were two young anacondas, iguanas, tortoises and turtles.

There was only one loss of consequence in the reptile collection during the entire year. This was a specimen of the Indian cobra, which has been on exhibition over twelve years. This

snake was attacked with a series of small abscesses along the entire body and stopped feeding. It was several times taken from the cage, held by the neck and forcibly fed with beaten egg. The companion of this specimen, which arrived at the same time, is in thriving condition.

CENSUS OF REPTILES.

January 1, 1921.

		<i>Species</i>	<i>Specimens</i>
Crocodylia,	Alligators and Crocodiles..	4	41
Chelonia,	Tortoises and Turtles.....	22	166
Lacertilia,	Lizards	8	51
Ophidia,	Snakes.....	37	139
Amphibians,	Frogs, Toads, Salamanders	12	63
Dipnoi,	Lung Fishes	1	1
Pisces,	Fishes	1	4
Total.....		85	465

SUMMARY OF COLLECTIONS.

A census of the animals in the Zoological Park, taken January 1, 1921, is as follows:

	<i>Species</i>	<i>Specimens</i>
Mammals	196	629
Birds	797	2,412
Reptiles and Amphibians.....	85	465
Total	1,078	3,506

REPORT OF THE VETERINARIAN.

W. REID BLAIR, D. V. S.

The health of the collections has remained good throughout the year and we have lost but few of our rare or important animals.

We have been fortunate, in that the large number of new animals received in the important shipments from Africa, Aus-

tralia and elsewhere did not materially increase our death rate during the past year. All of these shipments came in such excellent condition that the animals soon adjusted themselves to their new environment and quickly became acclimated.

Because of the threatened danger of introducing serious infectious diseases into this country through our importation of animals from Africa, the Bureau of Animal Industry of the United States Department of Agriculture was reluctant to lift the embargo, and upon the shipment's arrival in this country their representatives supervised the debarkation of these animals with great care. We were, however, able to meet all the requirements to their entire satisfaction. It is gratifying to report that none of these animals have died since their arrival in the Park.

The rare mountain zebra acquired in this African shipment arrived not a minute too soon, because when released from its crate it was seen to be in an exhausted state bordering on collapse; but after a few days in a sunny yard, and with mild weather, it soon gained in strength and vigor and is now in good condition.

About 50% of the deaths during the past year were among the small mammals, and the greater number of these were among the less important rodents, which are necessarily more closely confined in order to be satisfactorily exhibited. The small mammal collection is one of the most difficult to maintain owing to the close confinement, and the constant difficulty experienced in obtaining the great variety of food the various species are accustomed to find under normal conditions of freedom.

On two occasions distemper appeared among the smaller carnivores in the Small-Mammal House. The disease was introduced through recently acquired animals, and a number died or were destroyed in order to stamp out the infection. Distemper also appeared in a wolf which was isolated and recovered after treatment with distemper serum.

For the first time in several years skin diseases, both sarcoptic mange and ring-worm, were found in new arrivals, but in these cases the animals were promptly isolated and successfully treated.

In spite of the fact that the cages in the Primate House have been in a much overcrowded condition throughout the year, there have been few deaths of the more important species. As a result of the overcrowded condition of the cages, and the pugnacity on the part of a number of rhesus monkeys, there were a larger number of cases of serious injuries caused by fighting among the smaller monkeys.

Of the deaths among the primates a large percentage represent animals which had been received as gifts, and had in most instances been in private homes for a considerable time, and where they were retained as long as they appeared in good health. When, however, they showed evidences of ill-health and malnutrition, they were offered to the Park. In many cases these animals responded to the more expert care of our keepers and later became desirable accessions. In other cases, however, these animals soon became unfit for exhibition in our cages and were consequently humanely destroyed.

The health of the higher apes has remained good. The most important loss in this collection was that of the chimpanzee baby, born to Suzette on July 14, and which died nine days later, owing to the lack of proper maternal instincts on the part of the mother.

Among the hoofed animals, a number of our old bison were destroyed on account of malnutrition and emaciation incident to old age.

The American bison, elk and European red-deer herds are all showing the effects of old age and need new blood in order to bring them up to the standard of vigor maintained for so many years, since we can no longer expect to successfully breed satisfactory animals among these herds without the introduction of new, young and vigorous stock.

Of the accidental deaths occurring among the hoofed animals, the principal ones were due to fighting among corral or range animals.

A rare lechwe antelope was so badly injured by getting its leg caught in the fence of its corral that it was necessary to destroy it.

A number of young red deer and American elk were destroyed when it appeared that these animals would not develop

into satisfactory exhibits. Several other young deer perished as the result of being born out of season, as when born in the late fall or winter months, and therefore were unable to withstand exposure during our cold storms.

A number of beaver died from acute miliary tuberculosis. These are the first cases of tuberculosis we have found among animals of this species. It was not possible to trace the source of infection in these cases, although our beaver pond was overstocked at the time, and this crowded condition of their quarters offered the necessary environment for the spread of the infection.

DEPARTMENT OF ADMINISTRATION

H. R. MITCHELL, Chief Clerk and Manager of Privileges.

WM. MITCHELL, Cashier.

It was hoped that the sum granted by the Board of Estimate for the maintenance of the Park for the year 1920 would be adequate, but by analyzing the budget it will be noted that the sum allowed for all purposes other than personal service was a little over \$5,000 above the actual expenditures for the same purposes in 1919.

The prices of food materials and other general supplies continued their upward trend until about the middle of the year and did not recede to any marked extent until late in the year. In the cost of coal alone the increase was nearly equal to the increase allowed for all supplies, and one important food item amounted to nearly \$2,500 more than in the previous year. As a result, by mid-year a shortage of about \$7,500 was indicated. Fortunately some savings were made in salaries accounts due to vacancies and the filling of positions by new employees at lower than schedule rates because of the unusual turnover in labor and other causes. Application was made to the Board of Estimate for the transfer of these savings, aggregating about \$5,000, to supplies accounts.

Favorable action was finally taken on our request, and by rigid economies in the closing months of the year we were able to reduce the shortage on supplies to be made up by the Society to \$1,443.80.

Funds and Accounts:—The receipt in May of a substantial portion of the bequest of Mrs. Margaret Olivia Sage made necessary the opening of two new accounts, the Sage Endowment Fund for the bequest and the Sage Endowment Fund Income Account for the income therefrom. Exhibits of the receipts and expenditures in these funds appear with the Treasurer's statements in this Report.

The usual audit of our accounts was made at quarterly periods by the Society's auditors, and their certificate appears immediately following the statements of the Treasurer.

Privileges:—On the whole and in spite of the various difficulties that obtained in many branches of this department, the year's net showing was considerably beyond that of any previous season. This result was due very largely to the increased volume of business caused by the record attendance of 2,250,177, which was nearly a quarter of a million above any year since the Park opened.

It was thought that the remarkable number of out-of-town visitors in 1919 from all parts of the country, due to the army demobilization, would not soon again be equaled, but the fact is that the figures seemed to have been exceeded in 1920.

Rocking Stone Restaurant:—The gross business at the restaurant during 1920 was well above any previous year. Some further advances were made in prices but the cost of supplies and labor which did not reach the highest level until after the best part of the season had gone, resulted in a loss that had to be carried by more favored activities.

Up to this time the Rocking Stone Restaurant has been operated with full service and a full force throughout the year. Owing to the considerable loss during the winter months in the early part of 1920, it was decided to reduce the service to a minimum this winter and see if a more satisfactory showing cannot be made.

Boating:—The proceeds of the boating season just closed were very much greater than in any previous year. During most of the season our facilities were taxed to the utmost and this condition prevailed much later in the year than usual owing to the mild weather throughout the early fall.

Extensive repairs to the entire equipment went on through the winter. A number of the oldest rowboats had to be destroyed, and to replace them a carload of new boats was ordered for delivery in the early spring.

The new booth, the frame work of which was built last fall, was completed early in the year and opened when the boating season commenced. It proved to be a very much needed addition to our facilities for handling the business on big days.

The next extensive repair that must be made in connection with this privilege is the construction of substantial steps leading from the docks to the Boat House. The wooden steps, built when the building was erected in 1907, are in such bad condition that further satisfactory repairs are difficult, if not altogether out of the question. We urge the construction of permanent steps of masonry to conform with the basement of the building. Fortunately, stone left over at the time the dock was built is close at hand and would greatly reduce the cost of this improvement.

Boat House Restaurant:—We again continued the practice of closing the dining room during the winter and operating a limited service in the lunch room without the expense of a full kitchen force. While this method enabled us to reduce winter losses to a minimum, the boating feature was again obliged to absorb a considerable loss for the year.

Soda Water:—This section of the privileges was beset with somewhat more than the ordinary difficulties that have followed it persistently now for five years. Prices were close to the top throughout the greatest part of the season. For a time the sugar shortage threatened disaster and a complete closing down, but by strenuous efforts a sufficient supply was secured at high prices. The excessive cost of this item alone reduced the net results to the extent of several thousand dollars.

We have now reached the point where gradual replacement of our soda fountain equipment must be carried on and we are planning to make a completely new installation in the Tea House at the beginning of the next season, to be followed by other new outfits elsewhere another year.

Guide Books:—All previous records for the sale of this publication were surpassed during the past year. For some years our standard edition of 20,000 copies has been considered suffi-

cient to run through two seasons, but this time, in spite of the advance in the selling price, the new edition was so nearly exhausted at the end of the year as to make it necessary to commence work on a new issue to be available before spring. Estimates indicate the necessity of a further advance in the selling price to fifty cents per copy or a sacrifice in the quality of the paper or printing, which we are unwilling to recommend.

Souvenir Books, Postals and Miscellaneous Publications:—Our edition of the Souvenir Book which was selling so satisfactorily at the close of 1919 continued in popularity throughout 1920 with the result that by the end of December there were so few copies on hand it was decided to get out a new issue during the winter months. It is probable that some changes will be made in the size of the book with an entirely new cover design, but using the present excellent four-color plates for the interior pages. We will not be able to get the new book out at a price that will justify its sale at the old figure of fifty cents.

Heavy inroads were made into the stock of nearly two million colored souvenir postal cards which were put on sale early in the year.

The first edition of the Wild Animal Stamp Primer was exhausted late in the year and it was decided to issue a second edition of ten thousand copies from the previous plates without revision and to be ready early in April, 1921.

Other miscellaneous publications showed very substantially increased sales throughout the year.

Gate Receipts:—The collections for the year from this source were considerably more than for any previous year, amounting to a little more than \$16,000, almost double those of two years ago.

Inasmuch as all these funds were needed, as heretofore, for necessary and imperative improvements and repairs the entire sum was therefore placed to the credit of the Improvement and Repair Account to be expended in repairs, replacements or improvements of a permanent nature. The unexpected balance available for this purpose at the end of the year was \$11,462.33.

Riding Animals:—The receipts for the season from this source were substantially in excess of the year 1919. In fact the present stand and equipment has been outgrown, and steps should be taken to place it on a basis that will make it possible for

us to give a more satisfactory service to the thousands of children to whom this is such an improvement feature of the Park.

During the year an opportunity was offered to add to the number of animals available for riding purposes and at the same time give us some new blood for breeding purposes. Four attractive new ponies were purchased and shipped in from North Carolina.

The riding animals, as the receipts show, are becoming more popular each season and serious consideration should be given to providing a new location for their operation where it will be unnecessary to use a roadway so greatly crowded with foot traffic as the Service Road is at this point.

DEPARTMENT OF FORESTRY AND CONSTRUCTION

HERMANN W. MERKEL, Chief Constructor and Forester; E. H. COSTAIN, Asst. Forester; MICHAEL O'KEEFE, Head Gardener.

Continued shortage of labor and the difficulty in obtaining materials when ordered have made it impossible to carry out the ambitious program of repair and replacement that had been laid out for the year 1920. Were it not for the fact that a decided change has taken place in the labor and material market, the outlook would be gloomy.

Maintenance.

The routine maintenance work was carried on as heretofore, with the exception that it was carried on more successfully than during the previous three years, and that this Department has been able to catch up with work which it was compelled to neglect in former years. In spite of the fact that the exceedingly hard winter and the great snowfall made extraordinary demands upon the force, the Maintenance Department was able to improve substantially the general appearance of the park, and to look after the most urgently needed repairs to the buildings and other installations.

At the Large Bird House, the entire glass roof was reset and many leaks repaired, and the roof structure, which in some instances had become so dangerously weak as to cause the heavy glass to drop several inches, was put in safe condition.



BLACKBIRDS' CAGE

Constructed entirely by the Zoological Park force under the direction of Chief Constructor Merkel.
Photograph by Elwin R. Sanborn.

The entire western portion of the large pavilion in front of the Wolf and Fox Dens was re-shingled.

At the Antelope House the roof, which was leaking badly, was repaired, and many repairs were made to the Lion House, Monkey House, Reptile House and other buildings.

The three automobile trucks were taken down, cleaned and repaired.

The fences of the Prairie Dog Enclosure, Small-Deer House, Elephant House, Elk Range, Buffalo and Yak Ranges were repaired and painted, as were also the Lion House and Large Bird House inside cages, the Wolf and Fox Dens, one of the green-houses at the Nursery and other minor installations.

The usual food supplies were raised at the Nursery, which also supplied the bedding and ornamental plants needed in the park. Many evergreens, that formerly were imported and no longer can be brought into this country, were propagated at the Nursery.

The picnic grounds of the East Side of the park were visited by an ever increasing number of visitors. Picnic permits were issued to 164 parties for 19,799 persons. Strict supervision was maintained to keep in control all disorderly elements that could not or would not conform to the law. One-hundred and seventy-five summonses were issued, 169 convictions being secured, and fines amounting to \$387 were imposed. The popularity of the East Side of the Zoological Park is shown by the number of visitors in the past year, amounting to 183,250.

IMPROVEMENT AND REPAIR FUND.

Blackbirds' Cage.

The Blackbirds' cage, situated south of the Aquatic Bird House, was completed early in the spring, and has proved to be entirely satisfactory in design and construction.

Elephant Cellar Drainage.

The recurring floods in the cellar of the Elephant House finally compelled us to install a drainage system under the floor of the cellar and boiler pit, and this system was connected with

a sump containing an automatic pump. This cellar is now dry for the first time since this building was erected.

Lion House Boiler.

A new boiler was installed in the Lion House and connected with the heating system. This boiler is of sufficient capacity to carry the building during any but the coldest weather, and has resulted not only in greater convenience, but also in coal saving.

Repairs to Heating Systems.

Necessary work was done, also, on the heating systems of the Ostrich House, Elephant House, Large Bird-House, Hospital and the winter house of the Eagle and Vulture Aviary.

Repairs to Upper Bear Dens.

The floors of these dens had been built in such a slipshod manner that they had settled in many places, making it impossible to keep the dens clean and in a sanitary condition. It was necessary to break them up and regrade and concrete them in a permanent manner.

Parrot Cages.

Sixteen large and twelve smaller parrot cages were planned, constructed and set up in the Large Bird-House, this work being finished just in time to receive the large collection of these birds received from Australia.

Eagle and Vulture Aviary.

At the outdoor Eagles' cages, a beginning was made to thoroughly repair and paint these cages to prevent their collapsing. The supports of these cages consist of semi-circular steel frames, clamped together to hold the wire, and as it was impossible to reach any portion of the inside surfaces and paint them, corrosion had taken place to a very large extent. As far as we have been able to proceed this year, this structure was taken down entirely, thoroughly cleaned, painted, filled with an elastic cement which will prevent further ingress of water, and then re-erected. On account of the difficulty of obtaining bolts and other materials, it was possible to finish only three divisions.

Mammal House.

A great deal of the remaining wood floors of the eastern outside cages of the Mammal House was removed, and replaced with permanent concrete ones, temporary repairs only being made to the western cages, which will have to be replaced next year.

Guard Wires.

The wire guards throughout the Park, which had become very unsightly and dilapidated during the war, once more have been put into condition by replacing many of the steel posts and stringing a large amount of wire.

Children's Playground.

At the Children's Playground, sewer and water connections were made for the drinking fountain, and the same erected. Grading operations were completed.

This playground was first used on the occasion of the visit of the Russian refugees.

Lion Cages.

The outside cages of the Lion House, which were beginning to show wear, especially the cage fronts, gutters, concrete and brick facings, were taken in hand during the latter part of the year. All of the iron work was taken apart for cleaning and painting, and a portion of the concrete and brick work taken down preparatory to relaying. The old leadlined copper gutters, that had become useless, were removed, preparatory to being replaced by concrete gutters built into the facing, similar to those designed and built in the Small-Mammal House, though of larger capacity. Weather permitting, this work will be carried on during the winter, so as to have the cages ready for the animals when warm weather begins.

Repairs to Water Supply.

Unfortunately, we were not able to make any but the most urgent repairs to the water supply system. This work will have to be taken in hand during the coming season.

Miscellaneous Repairs.

At the Elephant House and the Antelope House, various wooden runways were replaced by new concrete inclines of a more sanitary character and permanent design.

Walk Repairs.

The most urgently needed walk repairs, amounting to about 126,000 square feet, were made on the roadway of the Concourse, the Service Road from Southern Boulevard to the top of the Buffalo Hill, the East Elephant Walk from the Service Road to Baird Court, the walk north of the Wild-Fowl Pond, the walk surrounding the Small-Deer Corrals, and the one connecting the same with the Service Road past the west side of the Small-Mammal House, and certain portions of the Service Yard. These walks were resurfaced, after repairing and bringing to grade any depressions or breaks in the old surface, with distributing trucks for both the tarvia and screenings. This was conducted expeditiously and cheaply, though the wet season caused some delay and additional expense.

The Service Road west of the Lion House, leading from the Main Service Road to Cope Lake and the Concourse, which never had been brought to grade and surfaced, was repaired, brought to its proper level, and given a coat of tarvia. It now, for the first time, is in a satisfactory condition.

A portion of the sidewalk of the Concourse in front of the east steps was ripped up and relaid upon a proper foundation with concrete and brick.

SUMMARY.

As may be seen from this report, comparatively only a few items can be stricken from the long list of urgently needed repairs and replacements that were mentioned last year, and several new items must be added to the list.

Possibly, the most troublesome of these is the roof of the Reptile House. This roof, which rests upon iron braces, is built of wooden beams and purlins, with an inside wood ceiling and outside roof boards. Serious decay has taken place in a great deal of this woodwork. The building is subjected to a temperature of approximately 75 degrees and contains much exposed water in its various pools and tanks, with the air continuously surcharged with moisture, which, together with the presence of many skylights, is undoubtedly the cause of a great deal of this decay. The heavy outside skylights, with very thick glass, have become too great a burden for the weakened woodwork, so that

repairs have become imperative. At the present time, the most serious weakness has been temporarily supported by a truss.

Additional storage room is badly needed in the Service Yard, and if the \$15,000 once informally agreed to by the Board of Estimate and Apportionment about a year and a half ago, cannot be made available, some temporary structures must be added to the present equipment.

The task before this department, in order to rehabilitate the Park, is at least as great as it was a year ago, but with the present outlook of lower material costs and greater availability of material as well as labor, it is hoped that a grand cleanup of all of the important items can be made during the coming season, if sufficient funds can be appropriated.

DEPARTMENT OF PHOTOGRAPHY AND PUBLICATION.

ELWIN R. SANBORN, Editor and Photographer; ANNA NEWMAN, Assistant.

Photography.—The photographic work during the past year of 1920 comprised the usual details of this department in making various phases of construction records, copying drawings and paintings, still life subjects and the living collections. Some of the subjects photographed were Bactrian camel and young, yak, Polar bear, eyra cat, giant ant-eater, otter, Rocky Mountain sheep, chimpanzee, alligators, panda, onager, black-tailed deer, musk-ox, wapiti, hog deer, barasingha deer, sika deer, zebra, llama, alpaca, tree duck, dromedary, lung-fish, feather-tailed mouse, opossum mouse, wild-fowl, tree toad, Belgian Expedition, Roosevelt Day events at the Italian Gardens, and various detail work such as construction, still life, maps, copies, etc. No doubt the cessation of the war inspired a welcome relief that was experienced among all classes, stimulated business, and aroused many dormant crafts to renewed life. This change was manifested materially in a greatly increased demand for photographs for publications, advertisements and for the use of sculptors, artists, taxidermists and designers. One publisher alone used over 200 photographs in his publications. This Department is now recognized among the publication and news offices of New York as a source of supply. The demands for pictures are increasing yearly.

Bulletin.—During the year 1920 printer's prices reached their maximum heights, and it is a satisfaction to know that these rates are now on the decline.

It behooves all writers and editors to proceed with caution to avoid large bills for author's alterations and extra time charges.

Six numbers of the *Bulletin* were issued in somewhat easier fashion than during the previous year of 1919. The standard of this publication has been maintained, and the numbers issued in 1920 were of unusual interest. Paper stock even now is not easily obtained, and when obtained it varies in color and weight. It is a strange fact that war was needed to forcefully demonstrate the scarcity of materials that are required to make printing papers, and to furnish the courage among paper makers to put the price at the highest point.

Dr. Townsend and his staff produced two noteworthy issues of the *Bulletin*. One of them was devoted to the evolution of the Aquarium Building, and was illustrated with numerous pictures from a series of old drawings and engravings of the ancient Aquarium and some of its notable visitors, with text matter of unusual historical interest.

Mr. Herbert Lang contributed the text and illustrations for an article on the white rhinoceros. The matter was sufficient to make 28 pages of text, and 32 rare illustrations of this wonderful animal, from photographs by Mr. Lang, accompanied the article. Like Mr. Grant's "Saving the Redwoods," a special cover made this one of the most striking *Bulletins* ever issued by the Society.

Dr. Murphy of the Brooklyn Institute contributed an interesting article on the Zoo of Lima, Peru. Another article of very particular importance was "Remarkable Habits of the Sage Grouse," by R. Bruce Horsfall. Mr. Horsfall supplied some of his beautiful pen drawings and paintings for illustrations, as well as contributing the text.

Annual Report.—The Annual Report of the Society was issued in the form of previous years and in all respects compared favorably with other issues of this volume.

Zoopathologica.—The plates for Dr. MacCallum's latest paper on parasitic forms are completed and the text matter has been put into type ready for publication after the first of the year of 1921. The amount of material furnished by Dr. MacCallum will make this latest number by far the most voluminous published in this series.

Zoologica.—Two numbers of *Zoologica* were supplied by R. Bruce Horsfall and Curator Lee S. Crandall. The former contributed "Remarkable Habits of the Sage Grouse," with illustrations. Mr. Crandall's subject was "Eclipse Plumage in Domestic Fowl."

Following is a statement of the photographic work in 1920:

Prints for Album (Aquarium).....	25
Negatives for Albums (Park).....	315
Prints for Publication	848
Prints for Miscellaneous Purposes.....	957
Enlargements	21
Transparencies	2
Total	2,168

CONCLUSION.

The close of the year 1920 leaves the officers of the Zoological Park profoundly grateful for the fact that the Park is well stocked with collections, that the Zoological Park force is less harassed than heretofore by the problems of existence, and that the popularity of the Park has not only been maintained but apparently has increased.

The two very important storage sheds which we thought we had secured in 1920, but which got lost in the shuffle, still are needed as much as ever, and still are hoped for.

The relations of the Zoological Park with similar institutions throughout the world are cordial and very gratifying.

It is not to be expected that the year 1921 will see so great an inflow of living animals as was witnessed during the past year, but this is not necessary. We do intend, however, to continue our efforts to secure certain large and highly important animals that managed to elude us last year but which are to be regarded as indispensable.

Respectfully submitted,

WILLIAM T. HORNADAY,

Director.

RECORD OF NOTABLE ARRIVALS AND SPECIES

NEW TO THE ZOOLOGICAL PARK

1920

While we are averse to the publication in annual reports of long lists of animals, the present occasion seems to demand an exception. We cannot resist the temptation to place before the members of the Society a brief enumeration of the most notable and interesting arrivals in birds and mammals during the year 1920. Aside from this exhibit of good fortune, the showing of localities represented will serve as an excellent index of the representative character of our collections and the extent to which they cover the world at large.

W. T. H.

MAMMALS.

By R. L. DITMARS.

The purchases during the year 1920 involved so many important species that it is interesting to arrange the mammal accessions in the sequence of zoological classification. The list follows and is quite imposing in the magnitude of numbers and the rarity of many species:

Primates.

2 Hoolock Gibbons	Malaysia
2 Sooty Mangabeys	W. Africa
2 Vervet Monkeys	W. Africa
2 Wanderoo Monkeys	India
1 Golden Baboon	E. Africa
2 Chacma Baboons	S. Africa
1 Rhodesian Baboon	S. Africa
1 Mandrill	W. Africa



WILD BOAR FROM AFRICA

The Society is observing—with interest—the development of the two specimens brought to us from North Africa.

1 Black Drill	W. Africa
5 Mongoose Lemurs	Madagascar
1 Ring-tailed Lemur	Madagascar
3 Galagos	E. Africa

Ungulates.

1 Onager	S. W. Asia
1 Mountain Zebra	S. Africa
2 Chapman-Burchell Zebras	S. Africa
3 Blessbok	S. Africa
2 Springbuck	S. Africa
1 Greater Kudu	S. Africa
1 Sable Antelope	S. Africa
1 Lechwe Waterbuck	S. Africa
1 Brindled Gnu	S. Africa
2 Columbian Black-tailed Deer	Pacific Coast
1 White-lipped Peccary	Brazil
1 Collared Peccary	Brazil
2 Wild Boars	N. Africa
1 Warthog (Female)	S. Africa

Carnivores.

2 Otter	Canada
1 Eyra Cat	Mexico
1 Coyote	U. S.
3 Timber Wolves	U. S.
1 Gray Fox	Mexico
2 Red Foxes	U. S.
3 Gray Foxes	U. S.
3 Badgers	U. S.
5 Coati Mundis	Central America
1 Panda	India
2 Ratels	S. Africa
4 Meerkats	S. Africa
2 Suricates	S. Africa
1 Genet	S. Africa
3 Kusimanse	S. Africa
1 Civet Cat	Malaysia
2 Skunks	U. S. (Florida)
2 Zorillas	S. Africa
1 Hunting Dog	S. Africa
2 Long-eared Foxes	S. Africa

Rodents.

2 Snow-shoe Rabbits	U. S.
1 Spring Hare	S. Africa
2 Porcupines (Crested)	S. Africa
1 Porcupine (Crestless)	India
1 Red-bellied Squirrel	India
1 Malabar Squirrel	India
1 Prevost's Squirrel	Malaysia
4 Fire-bellied Squirrels	Mexico
3 Red Squirrels	Europe
7 Ground Squirrels	S. Africa
1 Patagonian Cavy	So. America
2 Spotted Cavies	So. America
2 Bushy-tailed Dormice	Europe
1 Capybara	So. America
2 Hamsters	Europe

Marsupials.

1 Koala or Tree "Bear"	Australia
2 Tasmanian Devils	Tasmania
3 Wombats	Australia
2 Giant Red Kangaroos	Australia
1 Western Red Kangaroo	Australia
2 Bernard's Kangaroos	Australia
2 Nail-tailed Wallabies	Australia
2 Flying Phalangers	Australia
4 Vulpine Phalangers	Australia
3 Tasmanian Phalangers	Tasmania
2 Feather-tailed "Mice"	Australia
1 Opposum "Mouse"	Australia
4 Bandicoots	Australia
3 Dasyures	Australia
6 Murine Opossums	So. America

Edentates.

1 Great Anteater	So. America
1 Three-toed Sloth	So. America
1 Two-toed Sloth	So. America
4 Nine-banded Armadillos	U. S. (Texas)

Miscellaneous.

2 Sea Lions	U. S. (California)
5 Cape Hyrax	South Africa

BIRDS.

By LEE S. CRANDALL.

The following list contains the more important arrivals during the year, species new to the Zoological Park collection being indicated by asterisks. The host of less unusual birds, which go to make up the numbers of every large collection, have not been included here. With the exception of two cocks-of-the-rock and the white-throated bat falcon, received from the Tropical Research Station, and a few stragglers secured from dealers, the birds listed were included in the three important shipments of the year. These were the consignment brought by Mr. Ellis S. Joseph from Australasia, one from South Africa by Mr. A. K. Haagner, Director of the Zoological Gardens of Pretoria, and the collection gathered in Europe by the Curator.

Casuariiformes

- 1 Bennett Cassowary—*Casuarus bennetti*.

Galliformes

- 2 Ocellated Megapodes—*Leipoa ocellata*.
- *3 Reinwardt Scrub-fowls—*Megapodius r. reinwardti*.
- *1 Swainson Francolin—*Pternistes swainsoni*.
- *2 Banded Quail—*Philortyx fasciatus*.
- 2 Common Peacock Pheasants—*Polyplectron chinquis*.
- 2 Black-breasted Crested Guinea-Fowl—*Guttera pucherani*.

Turniciformes

- *2 Indian Hemipodes—*Turnix tanki*.
- *2 Little Hemipodes—*Turnix dussumieri*.

Columbiformes

- 1 Purple-crowned Fruit Pigeon—*Lamprotreron superba*.
- *3 Lilac-shouldered Fruit Pigeons—*Chlorotreron iozona*.
- *2 New Guinea Purple-breasted Fruit Pigeons—*Megaloprepia poliura*.
- *1 Golden-fronted Fruit Pigeon—*Sylphitreron aurantiifrons*.
- *2 White-fronted Bronze-wing Pigeons—*Henicophaps albifrons*.
- *2 Yellow-heart Pigeons—*Phlogœnas rufigula*.
- 2 Amethyst Pigeons—*Phlogœnas kubaryi*.
- *1 Beccari Pigeon—*Phlogœnas beccarii*.

*Species new to the collections.

Ralliformes

- *2 Australian Moor-hens—*Gallinula t. tenebrosa*.
- *3 New Guinea Moor-hens—*Gallinula frontata*.
- *2 New Guinea Red-necked Rails—*Eulabeornis tricolor grayi*.
- *2 New Guinea Pectoral Rails—*Eulabeornis philippensis* sub sp.

Lariformes

- 12 Franklin Gulls—*Larus franklinii*.

Gruiformes

- 2 Paradise Cranes—*Tetrapteryx paradisea*.
- *2 Australian Cranes—*Mathewsia r. rubicunda*.
- 1 Kagu—*Rhinocetus jubatus*.
- 1 White-winged Trumpeter—*Psophia leucoptera*.
- 1 Dusky Trumpeter—*Psophia obscura*.

Ardeiformes

- *1 White-bellied Stork—*Abdimia abdimi*.
- 2 Northern Boat-billed Herons—*Cochlearius zeledoni*.
- *1 Nankeen Night Heron—*Nycticorax caledonicus*.

Anseriformes

- *1 South African Sheldrake—*Casarca cana*.
- 2 Maned Geese—*Chenonetta jubata*.
- *4 Eyton Tree Ducks—*Ctenanas eytoni*
- 4 Formosan Teal—*Nettion formosum*.

Pelecaniformes

- 1 Frigate Bird—*Fregata aquila*.

Accipitriformes

- 1 Secretary Bird—*Serpentarius serpentarius*.
- 2 Pondicherry Vultures—*Otogyps calvus*.
- 1 Eared Vulture—*Otogyps auricularis*.
- *2 White-backed Vultures—*Pseudogyps bengalensis*.
- *1 Zone-tailed Hawk—*Tachytriorchis abbreviatus*.
- *1 White-headed Sea Eagle—*Haliaeetus vocifer*.
- 1 White-breasted Sea Eagle—*Haliaeetus leucogaster*.
- *1 White-throated Bat Falcon—*Falco albicularis*.

Strigiformes

- *1 Bengal Eagle Owl—*Bubo bengalensis*.
- 1 Spotted Eagle Owl—*Bubo maculosus*.

- 1 Cape Eagle Owl—*Bubo capensis*.
- 3 Arctic Horned Owls—*Bubo virginianus subarcticus*.
- 1 Indian Fishing Owl—*Ketupa ketupa*.

Psittaciformes

- 2 Keas—*Nestor notabilis*.
- *2 Kakas—*Nestor meridionalis*.
- *1 Yellow-rumped Lory—*Eos fuscata*.
- *1 Ornate Lorikeet—*Trichoglossus ornatus*.
- *1 Musk Lorikeet—*Glossopsitta concinna*.
- *2 Swift Lorikeets—*Lathamus discolor*.
- 2 Banksian Black Cockatoos—*Calyptorhynchus b. banksii*.
- 1 Gang-gang Cockatoo—*Callocephalon galeatum*.
- *2 Golden-winged Parrakeets—*Brotogeris chrysopterus*.
- *1 Golden-fronted Parrakeet—*Brotogeris tuipara*.
- *2 Red-bellied Parrakeets—*Pyrrhura vittata*.
- 1 Imperial Amazon—*Amazona imperialis*.
- *1 Timneh Parrot—*Psittacus timneh*.
- 1 Barraband Parrakeet—*Polytelis swainsonii*.
- 2 Black-tailed Parrakeets—*Polytelis anthopeplus*.
- 1 Queen Alexandra Parrakeet—*Spathopterus alexandrae*.
- 2 Yellow-bellied Parrakeets—*Platycercus caledonicus*.
- *1 Yellow-rumped Parrakeet—*Platycercus f. flaveolus*.
- 2 Stanley Parrakeets—*Platycercus icterotis*.
- *2 Black-hooded Parrakeets—*Psephotellus chrysopterygius dissimilis*.
- *1 Turquoise Parrakeet—*Neophema pulchella*.
- *2 Uvæan Parrakeets—*Nymphicus uvæensis*.
- *2 Olive Grass Parrakeets—*Melopsittacus undulatus* var.

Coraciiformes

- 1 Lilac-breasted Roller—*Coracias caudatus*.
- *1 Papuan Wreath-billed Hornbill—*Rhytidoceros plicatus*.
- 1 Tawny Frogmouth—*Podargus s. strigoides*.

Passeriformes

- *2 White-barred Ant-thrushes—*Thamnophilus doliatus*.
- 1 Picine Woodhewer—*Dendroplex p. picus*.
- *1 Venezuelan Vermilion Flycatcher—*Pyrocephalus rubinus saturatus*.
- 2 Cocks-of-the-Rock—*Rupicola rupicola*.
- *1 Macklot Pitta—*Pitta mackloti*.
- *1 New Guinea Pitta—*Pitta novæ-guinæ*.

- *1 Pied Babbler—*Crateropus bicolor*.
- 3 Jardine Babblers—*Crateropus jardinei*.
- *1 Red-throated Thrush—*Turdus ruficollis*.
- 1 Black-throated Thrush—*Turdus atrigularis*.
- *1 Pied Chat—*Saxicola picata*.
- *1 Evening Grosbeak—*Hesperiphona v. vespertina*.
- 2 Orinoco Saltators—*Saltator orinocensis*.
- *2 Rendall Singing Finches—*Anomalospiza imberbis*.
- *4 Varied Buntings—*Passerina versicolor*.
- *1 Red-headed Calliste—*Tangara desmaresti*.
- *1 Gray-headed Mannikin—*Munia caniceps*.
- *2 Parrot Finches—*Erythrura psittacea*.
- 3 Violet-eared Waxbills—*Granatina granatina*.
- *1 Golden-crowned Oriole—*Icterus auricapillus*.
- *3 Amethyst Starlings—*Cinnyricinclus leucogaster verreauxi*.
- *1 Black-necked Myna—*Graculipica nigricollis*.
- 1 Maroon Oriole—*Oriolus trailli*.
- 1 Lesser Bird of Paradise—*Paradisea minor*.
- *2 Prince Rudolph's Blue Birds of Paradise—*Paradisornis rudolfi*.
- *3 Six-plumed Birds of Paradise—*Parotia sefilata*.
- *2 Magnificent Rifle-birds—*Craspedophora magnifica*.
- *4 Australian Cat-birds—*Ailurædus crassirostris*.
- *1 Himalayan Tree Magpie—*Dendrocitta himalayensis*.



COLUMBIAN BLACK-TAILED DEER

Every movement of this interesting deer under stress of alert attention is one of grace. Not even the stately Red Deer rivals it in majesty of pose.

REPORT OF THE PENSION BOARD

TO THE BOARD OF MANAGERS.

THE Pension Board of the New York Zoological Society continued its work during the year 1920 with the following members: Mr. Wm. Pierson Hamilton, Chairman; Mr. Percy R. Pyne, Treasurer; Messrs. William Woodward, Geo. Bird Grinnell, Lewis R. Morris, Chas. H. Townsend, H. R. Mitchell, R. L. Ditmars and H. W. Merkel, Secretary. Mr. H. R. Mitchell continued to act as Assistant Treasurer, while Mr. W. I. Mitchell had charge of the bookkeeping, pension deductions and other details.

Frequent meetings were held at the office of Mr. Wm. Pierson Hamilton, at 23 Wall Street, these offices being courteously made available by Mr. Hamilton for the use of the Pension Board, even when he was not able to be present.

The Pension Board is gratified to report that the income account of the Fund continues to accumulate at a very satisfactory rate, there being available for pension payments at the close of 1920 the sum of \$67,464.39 as against \$57,844.59 at the end of 1919. This income was composed of \$3,488.91 collected from the members of the Fund, interest on investments amounted to \$2,793.77, and the yearly contribution of \$8,000 from the New York Zoological Society.

Three pensions were granted during the year as follows: Geo. M. Beerbower, Owen McCabe and Mrs. Margereta Dahl, this now making ten pensioners on the rolls of the Fund, who were in receipt of \$2,967.88 during the year 1920.

The following eighteen members were admitted to the Fund: John Teevan, A. E. Ambrose, Wm. Smead, Wm. E. Gaffney, Edw. P. Carberry, Henry Schuler, John Conlin, Sterling Collison, Chas. von Hagen, Jr., Tressie A. Hunter, John J. Parker, Patrick

Masterson, Jos. J. Dooley, Geo. F. Moran, James J. Legg, Michael O'Hara, Joseph Mucha and Barney Rogers.

Three applicants were rejected because of their inability to pass the doctor's examination.

The resignations of the following thirteen members relieved the Fund of 73 years of accumulated services, and there was re-funded to them \$951.61:

Herbert De Rossi, Jan. 10, 1920.....	\$10.28
Lochart Muir, March 9, 1920.....	39.83
George P. Diehl, March 11, 1920.....	108.40
Ethel S. Meyer, April 15, 1920.....	142.06
Robt. Sutcliffe, April 20, 1920.....	200.02
Patrick Dolan, May 15, 1920.....	95.02
Florence Bethel, May 24, 1920.....	17.25
Patrick Masterson, June 3, 1920.....	5.28
John J. Parker, June 28, 1920.....	6.42
D. Moranville, July 10, 1920.....	116.32
George Miller, August 31, 1920.....	88.68
J. J. Dooley, Sept. 2, 1920.....	8.20
John F. Willis, Nov. 18, 1920.....	113.75
	<hr/>
	\$951.61

One death occurred, that of Fritz Dahl, who died at the age of 74 years and 4 months, after nearly 21 years of faithful service with the New York Zoological Society.

The membership of the Pension Fund consisted on December 31, 1920, of 122 members, this being an increase of two over that of December 31, 1919.

The members of the Pension Board look toward the future with confidence, in spite of the increased number of pensioners and the greater amount of pensions paid out than in previous years, and despite the criticism of instability that was directed against the Fund by the Carnegie Foundation. This criticism, the Board believes, is amply refuted by the Treasurer's statement, which is printed in this Report.

Respectfully submitted,

WILLIAM P. HAMILTON,
Chairman, Pension Board.

HERMANN W. MERKEL,
Secretary, Pension Board.

TROPICAL RESEARCH STATION

Kartabo, British Guiana

REPORT FOR THE YEAR, 1920

STAFF

WILLIAM BEEBE, Director; JOHN TEE-VAN, Assistant; INNESS HARTLEY, Research Associate; ALFRED EMERSON, Research Associate; J. F. M. FLOYD, Research Associate; CLIFFORD POPE, Research Assistant; ISABEL COOPER, Artist; MABEL SATTERLEE, Artist; WINIFRED J. EMERSON, Laboratory Assistant; THOMAS SMO-
LUCHA, Photographer.

I present herewith a brief resume of the activities during the year 1920 of the Station which the Zoological Society has established in British Guiana for the investigation of wild life in jungle and air and water. This laboratory has found what I hope is its permanent home, at Kartabo, on the point of land at the junction of the Mazaruni and Cuyuni Rivers.

This is the fourth year of the work of the Station, beginning at Kalacoon in 1916, and from the present point of view the choice of location could hardly have been better.

So exactly balanced between civilization and the jungle is our chosen site that within a half hour down river at H. M. Penal Settlement, we have the facilities of telegraph, cable and post office, and the tri-weekly service of the government steamers, bringing us ice, fresh fruit and vegetables, and all the comforts and luxuries which long residence in one place demands. On the other hand, red baboons, peccaries and all the varied life of the jungle sometimes come within a few yards of the opposite side of our laboratory.

Historically, the site of the Research Station is probably the most interesting in the Colony. Four hundred yards away is the little island of Kyk-over-al, which for over a century was the capital of Essequibo. In the Hakluyt volumes on British Guiana, and in Rodway's History are many interesting allusions to "Catharbo."

In the course of our residence at Kartabo we have learned that it is possible for persons wholly unused to the tropics and who have never even camped out before, to live in comfort and health in double-roofed tents, sleeping with the entrance flaps open, without mosquito nets, at the very edge of the jungle and a few feet distant from the river. And this, not for a few weeks merely, but for a year at a time, throughout all four seasons—the two rainy and the two dry, which are so remarkably distinct in this district. The success of these regulation United States army tents has been greater than I could have expected. To go through the heaviest of long rainy seasons without leaking a drop, or to have one's clothing without mold during that period is a record better than many Georgetown houses can boast. A single lantern keeps vampires at a distance, and mosquitoes and flies are unknown, while it is a radical refutation of the general idea of the tropics to have to sleep under a blanket every night.

In spite of the presence of perai, electric eels and poisonous sting rays, all of which are found near by, the entire staff bathes daily, often swimming far out into the river, and we believe that this exercise does much toward keeping us fit. We have learned that the most delicious meat of the Colony is bushmeat, and two Indians provide the accourie, labba, maam, monkeys, marudis, warracabras, bushpigs and deer which make up most of our bill of fare.

As far as actual exploration goes, we have added considerably to the general knowledge of the district. The area in which we work we have carefully mapped, and divided into numbered, one hundred foot squares. But the life of the jungle is so omnipresent and abundant at our very door we seldom have gone beyond a radius of three miles, while nine-tenths of our investigations are carried on within a half mile of our laboratory bungalow.

During the seven months from June to December, 1920, we have welcomed about seventy visitors to the Station, while actual workers on the staff have numbered seventeen.

Some of these investigators with their special problems are as follows:

I. W. Bailey, Harvard University—Relation of Ants to Certain Plants.

William Beebe, Columbia University and Zoological Society—General Evolutionary Problems in Ornithology and Ecology.

Miss Isabel Cooper, Bryn Mawr College—Artist.

Alfred Emerson, Cornell University—Life History of Kartabo Termites.

J. F. M. Floyd, University of Glasgow—Parasites of Vertebrata.

Forbes, Cornell University—Organs of Hearing in Lepidoptera.

H. Gifford, University of Nebraska—Comparative Ophthalmology.

G. I. Hartley, Cornell University—Relationships of Certain Non-oscine Birds.

Clifford Pope, University of Virginia—Life Histories of Kartabo Fish.

Miss Mabel Satterlee, Columbia University—Coloration of Ameiva and the Painting of Optical Fundi.

T. V. Smolucha, New Jersey—Photography and Pen-and-Ink Drawing.

Miss Anna Taylor, South Carolina—Botanical Painting.

John Tee-Van, Zoological Society—Ecology of Certain Lepidoptera.

Wm. M. Wheeler, Harvard University—Ants of Kartabo.

C. A. Wood, Stanford University—Optical Fundi of Birds and Other Vertebrates.

Twenty or thirty papers are in course of preparation and will be published, beginning with the autumn of 1921. Only the barest outlines can be given of some of the researches at present being carried on.

In the field of biology, the three aspects to which most attention has been paid have been color, its occurrence, development and use; breeding, with especial attention to season, courtships and nests; and food, with detailed examinations of stomachs of all classes of vertebrates.

About sixty species of mammals have been recorded from the district, ranging from mouse opossums to dolphins. One of the rarest is the two-toed or silky anteater, of which three have been seen, the last individual in the Colony House at the Penal Settlement. The mammals of British Guiana possess a unique historical interest, from a taxonomic point of view, for most of

Linnaeus' original collections came from this region, and thus we find that the most of the form are the types of their respective genera.

Nearly four hundred and fifty species of birds have been recorded, of which breeding notes have been made on one hundred and thirty species. This is probably the largest number ever recorded from so limited an area. Elaborate food notes have been made, and dissections of characters, hitherto little studied in fresh specimens, such as turbinals, the tail muscles, syrinx, tongue and fundus oculi.

Over one hundred species of reptiles and amphibians have been collected, their brilliant but evanescent coloring painted, and the embryology and life history of many worked out.

Only the fishes which have been taken inshore in weir and nets have been studied. These number about seventy-five, and in diversity and strangeness of form, food and habits, are an assurance of intensely interesting future work in this field. Collections have been made of the land travelling forms for study of their adaptive swim-bladders.

Among the insects, ants and termites or wood ants are the only groups which have been studied with any thoroughness. Prof. William M. Wheeler, who is the acknowledged authority on ants, collected over two hundred forms in two months, within a short distance of the laboratory, and actually secured ninety-three species from a single tree of medium size. In the cleared compound of the laboratory he found every genus of fungus-growing ant known in the world.

During two seasons' work, Mr. Alfred Emerson discovered seventy species of wood ants, within a half mile of the station. Fifty of these are new to science. A most remarkable series of one hundred kinds of guest insects were collected, some modified to an astounding extent. The castes of soldiers, workers, kings and queens, the nests, fungus diseases and parasites, wing development and general habits of many of these species have been recorded in notes, drawings and photographs. Although the interest is primarily purely scientific, yet investigations such as this may ultimately prove to be of considerable economic interest.

Although no work has been completed in other groups of invertebrates, yet a hasty resume of butterflies and moths shows

that out of a possible forty-four families, representatives of thirty-nine have already been secured.

Besides the research work carried on by members of the staff, specimens have been gathered in particular cases for immediate study elsewhere. Usually, however, requests for indefinite collections, desired for study at some future time, have been refused, for this is intended more especially as a Station for workers in the field, and not a collecting medium. Dr. Schultz of John's Hopkins is working on the embryology of red howling monkeys; Dr. Reese of the University of West Virginia on alligators, and young electric eels have been sought for Dr. Dahlgren of Princeton.

Several collections of live animals and birds have been sent to the New York Zoological Park, including a two-toed sloth, several cocks-of-the-rock, a hacka, electric eels, bushmasters, fer-de-lance and a young red "baboon."

We have already delved more deeply into the wild life of Kartabo, than corresponding work carried on in any tropical area of equal size, and yet the more we study the living things about us, the more we realize what a vast labor confronts us and our successors. We have hundreds of sheets of manuscript, thousands of photographs, colored plates and moving pictures, but only the satisfaction of a little thorough and sincere work accomplished keeps us from discouragement at the immense fields of investigation still lying ahead.

While most of the work of the Station will be brought out in scientific publications of the New York Zoological Society, yet the Director has felt it an equal duty to set forth some of the more popular aspects in magazines and books, such as the essays in "Jungle Peace" and in the later series in the Atlantic Monthly, beginning with "A Tropic Garden," which deals with the Georgetown Botanical Gardens. Eighty-six contributions from the Station, both technical and popular, already have been published.

There are two vital sources of satisfaction to the Director: First, that scientists of Great Britain and other countries are beginning to be interested, and to join the staff of workers, thus emphasizing the international character of scientific research, and refuting any consideration of the Station as solely an American undertaking. And second, the cordial relations which have always existed between the British Guiana government officials

and the Director and his Staff—relations direct, generous and altogether satisfactory.

These then, are some of the serious activities of the Station, its *raison d'être*, present and future. But it is impossible to convey in words the joy of life in such a place as this; the wonderful sunrises and the indescribable sunsets, the full moon glowing through bamboo filigree, recalling Japan, and the wandering little storms, each with its rainbow or sometimes two; the hard work and the hard play—the evenings of violent scientific argument, others of the reading of poetry, or tales of travel or war; the nights—dreamless and of absolute healthy repose, in preparation for days all too short.

The only regret, always present, ever more real, is the hopelessness of understanding more than a fraction of the problems which confront us. Each strange habit or character, song or color is no sooner studied and interpreted, than a hundred others rise to take its place.

If after all our labors, we can add a single stone to the edifice of human understanding of the great world of Nature about us, if we can bring any of our fellow human beings in the world to a greater appreciation of the beauties and wonders of this splendid country, I, and the generous gentlemen of the Zoological Society who are making our Laboratory possible, will feel that we have been more than repaid.

REPORT OF
THE PROSECTOR

TO THE BOARD OF MANAGERS

I BEG to submit the following Report covering the operations of the Prosector's Department for the past year.

The material received from the Society's Collections consisted of seventy-seven mammals distributed among the orders as follows:

Primates	24
Carnivora	18
Edentata	3
Rodentia	17
Marsupalia	15
<hr/>	
Total	77

There was also received one specimen of the Australian lung-fish, *Ceratodus*.

A number of living specimens of *Acanthias* were supplied for anatomical and experimental work on the nervous system by the New York Aquarium.

The material has been used, as in previous years, in prosecuting the work of the Department in morphological research and teaching.

Especial reference should be made to the progress of the investigation of the primate brain stem carried out by the department under Professor Tilney. This has advanced to a very satisfactory stage making it possible to establish the absolute nuclear homologies in the anthropoid and human brain. The scope of this work includes reconstructions of the gray matter of the brain stems, based on complete serial sections, from the medulla up to and through the optic thalamus, permitting a comparative analysis of the active substance (gray matter) in the brain of the following forms:

- | | |
|---------------|-----------------|
| 1. Gorilla | 5. Macacus |
| 2. Chimpanzee | 6. Cynocephalus |
| 3. Orang-utan | 7. Alouatta |
| 4. Gibbon | 8. Hapale |
| 9. Lemur | |

A remarkable history of special adaptation, according to the life and habits of the several primates thus examined, is being revealed by this investigation, and at the same time the order of relation of the lower types to the higher apes and man has been established upon the fundamental grounds of the homologies of the central governing system of the body. There seems to be no doubt in the light of the definite results obtained that the gorilla stands nearest in its cerebral organization to man. The structural similarities between man and gorilla are so complete and striking that none but the expert would be able to detect the differences, even microscopically. The chimpanzee, orang-utan, and gibbon follow next in succession in the order named. In the lower primates very wide and significant differences of internal structure are observed, and each difference appears to be indicative of a highly specialized adaptation to habitat, mode of life and general environment.

The work up to the present has as its main object the establishment of the fundamental homologies of the primate brain stem, with the analytic interpretation of the modifications resulting from the several divergent lines of environment adaptation.

A series of papers is in preparation, to be published shortly in the *Journal of Comparative Neurology*, illustrated by drawings of the reconstructions of the brain stem, camera lucida and projection drawings of selected portions of the gray and white matter, and photographs of sections at forty critical levels through the brain stem of each species.

Ultimately the results of the entire investigation will be brought together in the form of an atlas, giving the critical analysis of the Simian and Prosimian brain with relation to the evolution of the human brain.

Respectfully submitted,

GEO. S. HUNTINGTON,
Prosector, N. Y. Zoological Society.

January 1, 1921.



TAKING SKIN TEMPERATURES OF LARGE ANIMALS BY MEANS OF THE THERMO-JUNCTION AND GALVANOMETER

Dr. Benedict of the Carnegie Nutrition Laboratory has been making a lengthy series of experiments on mammals, birds and reptiles of the Zoological Park, in hermetically sealed chambers, supplied with oxygen. These studies of metabolism through respiration determinations, relate to energy requirements.

REPORT OF
THE PATHOLOGIST
TO THE BOARD OF MANAGERS

DURING the last eight or ten years in which I have been honored by the appointment as pathologist to the Zoological Society this is my first report. As this is the first opportunity that I have had of publicly expressing my great appreciation of the honor conferred by the Society in appointing me as pathologist for their great collection of biological specimens, perhaps the greatest in the world, I gladly do so now.

In such a collection, kept under confinement that is unnatural to the members of it, many cases of sickness and death must occur, so that the opportunity for examinations is exceedingly unusual, and to one interested in such work immense possibilities are sure to present themselves. I have found this to be the case and have not been slow to take advantage of it all, making it the sole object of my study and work.

In doing this, I may say that I have made a collection of thousands of specimens that I have tried to mount and preserve carefully so that they may be of use in the future as a reference for those who necessarily will be engaged in similar work.

Much of the material, I may say, is new to science, and as the tendency of students of biology today is devoted largely to an endeavor to discover the cause of disease, not only in mankind but also in such creatures as man necessarily comes in contact with in the source of his food or drink, etc., it becomes a very important study. This fact has been recognized all over the world and many of the best minds of today are engaged in such work with unusually good results, a fair share of which has fallen to men devoted to the study of science in this country. In fact, many of the best discoveries of the age in that line have fallen to Americans. Since the above facts must be acknowledged

as true and that the presence of parasites in the different biological organisms with which man comes in contact is becoming more generally known by their study, it is easy to see why so many ardent students are found to be engaged in this interesting and fascinating work. Much already has been done in finding this material, but one may say that a mere beginning has been made in the study of its future effects on man. In fact, all or almost all of the germs that recently have been discovered as the causes of different diseases, are parasites or their products, and pathology is becoming largely influenced by a knowledge of this fact.

To return to our immediate work at the Aquarium in New York and to the Zoological Park, I have to say that Dr. Townsend has been unremitting in his kindly endeavor to place at my disposal an immense amount of varied material which I have endeavored to make as much use of as possible, and I wish here to thank him for his kindness and also for his intelligent endeavor to let me have such material as promised results of the first order. At the Zoological Park, too, Dr. Hornaday has hitherto allowed his assistants to place at my disposal such material as I thought would prove of interest and use to humanity, and I here wish to publicly thank him for his kindness since he thus recognized that it would not be his fault if my endeavors did not produce the results which he and the rest of us hoped would follow.

I must not omit in this report, however, to thank Mr. Madison Grant for his unfailing response to any request I have had to make which he deemed consistent with the interests of the Society.

I had hoped to be able to give a detailed account of the diseases and ravages of parasites among the fishes and animals that have fallen under my notice during the term of my position as pathologist, but as I am limited for space I must refer those interested to my numerous papers of the work done for the Society until I may have an opportunity to take up the subject as a specialty.

Respectfully submitted,

G. A. MACCALLUM,

Pathologist, N. Y. Zoological Society.

January 1, 1921.



SAND FISH, *DIPLECTRUM FORMOSUM*

Photograph by Elwin R. Sanborn.

REPORT OF THE
DIRECTOR OF THE AQUARIUM

TO THE BOARD OF MANAGERS

THE year 1920 has not passed without events of importance to the Aquarium.

Through the financial aid of the Zoological Society an excellent collecting boat has been acquired which has made possible a great improvement in exhibits; an increase in exhibition space has been secured by the enlargement of tanks, and at the close of the year improvements have been authorized which will permit of the construction of additional tanks.

The attendance, which fell off to some extent during the war, has returned to almost the pre-war figures of over two millions.

The collecting boat *Seahorse* was in service from May 29 to November 8, and on November 18 was hauled out for the winter. The boat made twenty-six trips, collecting over 3,000 fishes of sixty different species. In addition to fishes, more than a thousand crustaceans, mollusks, and other invertebrates useful both as exhibits and as fish food were brought in.

The dimensions of the *Seahorse* are as follows: Length, 35 feet; beam, 11 feet; draught, $3\frac{1}{2}$ feet; length of forward cabin, 10 feet; length of after cabin, 7 feet; the well amidships is 10 feet long at the bottom, with the width and depth of the boat. There are berths for four men. The boat has a 25 horse-power engine, is sloop-rigged and is thoroughly staunch and seaworthy.

With the exception of one cruise in Long Island Sound, all the collecting was done in lower New York Bay in the vicinity of Sandy Hook. Collections were made partly by seining, but chiefly by visiting the numerous large pound nets located in the lower bay and making selections from the heavy catches of the commercial fishermen. As a rule trips were made only once a

week when men could be spared from their regular duties at the Aquarium, and were seldom of more than twenty-four hours' duration. The boat can, if desirable, give much greater service than has so far been necessary.

As the Aquarium is under the necessity of collecting its own exhibits, the addition of a well-boat to the equipment of the institution has permitted a decided increase in efficiency.

The work of the *Seahorse* has already been described in detail in the November number of the Zoological Society *Bulletin*.

FISHES AND INVERTEBRATES COLLECTED BY THE WELL-BOAT
SEAHORSE IN LOWER NEW YORK BAY
FROM JUNE 1 TO NOVEMBER 8, 1920:

FISHES

(Sharks, Skates and Rays)

Grayfish (*Mustelus canis*)
Blue Shark (*Carcharhinus milberti*)
Sand Shark (*Carcharias littoralis*)
Horned Dogfish (*Squalus acanthius*)
Common Skate (*Raja erinacea*)
Clear-nosed Skate (*R. eglanteria*)
Barndoor Skate (*R. laevis*)
Sting Ray (*Dasyatis centrura*)
Cow-nosed Ray (*Rhinoptera bonasus*)

(Sturgeons)

Common Sturgeon (*Acipenser sturio*)
Short-nosed Sturgeon (*A. brevirostrum*)

(Bony Fishes)

Eel (*Anguilla chrysypa*)
Glut Herring (*Pomolobus aestivalis*)
Shad (*Alosa sapidissima*)
Menhaden (*Brevoortia tyrannus*)
Billfish or Silver Gar (*Tylosurus marinus*)
Common Pipefish (*Siphostoma fuscum*)
Common Mullet (*Mugil cephalus*)
Common Mackerel (*Scomber scombrus*)
Chub Mackerel (*S. colias*)
Crevalle or Jack (*Caranx hippos*)
Yellow Mackerel or Runner (*C. crysos*)
Silver Moonfish (*Selene vomer*)
Common Pampano (*Trachinotus carolinus*)
Pilotfish (*Seriola zonata*)
Goggler or Big-Eyed Scad (*Trachurops crumenophthalmus*)
Bluefish (*Pomatomus saltatrix*)
Butterfish or Harvestfish (*Rhombus triacanthus*)
Long-finned Harvestfish (*R. paru*)
Striped Bass (*Morone lineatus*)
White Perch (*Morone americana*)

Black Sea-bass (*Centropristes striatus*)
 Scup or Porgy (*Stenotomus chrysops*)
 Pigfish (*Orthopristis chrysopterus*)
 Pinfish (*Lagodon rhomboides*)
 Sea-drum (*Pogonias cromis*)
 Weakfish or Squeteague (*Cynoscion regalis*)
 Spot or Lafayette (*Leiostomus xanthurus*)
 Kingfish (*Menticirrhus saxatilis*)
 Croaker (*Micropogon undulatus*)
 Tautog or Blackfish (*Tautoga onitis*)
 Cunner or Bergall (*Tautoglabrus adspersus*)
 Common Triggerfish (*Balistes carolinensis*)
 Massachusetts Filefish (*Monacanthus hispidus*)
 Orange Filefish (*Aluterus schoepfi*)
 Puffer (*Spheroides maculatus*)
 Spiny Boxfish (*Chylomycterus schoepfi*)
 Eighteen-spined Sculpin (*Myoxocephalus octodecimspinosus*)
 Common Sea Robin (*Prionotus carolinus*)
 Striped Sea Robin (*P. strigatus*)
 Shark Sucker (*Echeneis naucrates*)
 Common Toadfish (*Opsanus tau*)
 Whiting or Silver Hake (*Merluccius bilinearis*)
 Tomcod (*Microgadus tomcod*)
 Spotted Codling (*Urophycis regius*)
 Squirrel Hake (*Phycis chuss*)
 Summer Flounder (*Paralichthys dentatus*)
 Winter Flounder (*Pseudopleuronectes americanus*)
 Windowpane or Star Flounder (*Lophopsetta maculata*)
 Common Angler (*Lophius piscatorius*)

TURTLES

Atlantic Green Turtle (*Chelonia mydas*)

INVERTEBRATES

(Coelenterates)

White anemone (*Sagartia leucolena*)
 Jelly-fish (*Aurelia flavidula*)

(Echinoderms)

Starfish (*Asterias forbesii*)

(Mollusks)

Sand-collar snail (*Lunatica heros*)
 Channelled whelk (*Sycotypus canaliculatus*)
 Mud snail (*Nassa obsoleta*)

(Crustaceans)

Rock crab (*Cancer irroratus*)
 Horseshoe crab (*Limulus polyphemus*)
 Spider crab (*Libinia dubia*)
 Lady crab (*Platyonichus ocellatus*)
 Blue crab (*Callinectes hastatus*)
 Small hermit crab (*Eupagurus longicarpus*)
 Lobster (*Homarus americanus*)

MARINE PLANTS

Sea lettuce (*Ulva latissima*)
 Red alga (*Soleria chordalis*)



THE SEAHORSE
Lying in her berth at the Aquarium.



THE BOW OF THE SEAHORSE

Exhibition Tanks.—The circle of glass-fronted masonry tanks on the main floor has been under improvement for three or four years.

These tanks, originally constructed with their rear walls only four feet back from the heavy plate glass fronts, have been enlarged to nearly three times their original capacity by setting the rear walls eleven feet back. In some cases the tanks have been further enlarged by removing dividing walls and combining two tanks in one. The improvements thus effected have already been described in former reports and in the *Zoological Society Bulletin*. During the past summer eleven more tanks were enlarged, a fund of \$2,440 having been provided by the Zoological Society for that purpose. The four remaining tanks of the original size cannot be enlarged on account of their position.

The enlargement of the ground floor series of tanks has made possible not only a great improvement in appearance and an increase in exhibits, but has contributed very decidedly to the comfort and health of the inmates of the tanks. Much of this work has been done from time to time by the employes of the Aquarium without aid from the city or the Zoological Society.

Proposed Improvements.—Early in November the Executive Committee of the Zoological Society decided to undertake, at the expense of the Society, certain improvements of the building which have long been needed. It is now proposed to remove the pumping plant and other machinery from the rear of the Aquarium to the unused front basement and make available for exhibits the space now occupied by pumps, boilers and filters. The basement to be enlarged by excavation will afford more room for machinery than is now available in its present position and relieve the Aquarium of the long-standing trouble due to a furnace room periodically flooded by the tides. On February 5 the tide rose higher than ever before, almost touching the furnace fires. Steam heat was cut off the building owing to the entire submergence of the return pump for three hours.

Another improvement to be undertaken without delay is the addition of a third story to increase office space and provide laboratory facilities which the Aquarium has always lacked.

The Collections.—The living exhibits of the Aquarium are now more numerous and varied than at any time in the past. This is due to the enlargement of tanks and the possession of a

collecting boat. When the space now occupied by machinery is converted into exhibition space the collections can be further increased by one-fifth.

The collection of fishes now numbers 3,525 specimens and 138 species. Of reptiles there are 253 specimens and 23 species. There are 38 amphibians of 8 different species; and of mammals 6 specimens and 2 species. The invertebrates number 2,893 specimens, representing 20 species. The total number of specimens is 6,715, representing 190 species.

The fishes on exhibition may be classified as follows: tropical (Florida and West Indies), 48 species; northern marine, 44 species; native fresh water, 38 species; and foreign fresh water, 8 species.

The collection of amphibians and reptiles cannot be materially enlarged until more favorable conditions for keeping them can be provided. The same is true with regard to invertebrates which need a separate system of sea water. The present reservoir of stored sea water is tempered for the accommodation of tropical forms, and the cool sea water pumped from the harbor is now too impure for Aquarium purposes.

The most interesting gift to the collections was from Mr. Henry Whiton of New York, who presented several giant or alligator garfish. The specimens were brought from southwestern Louisiana on one of the steamers of the Union Sulphur Company by authority of Mr. Whiton. These fishes averaged about four feet in length, and as the species attains a length of at least eight feet and is very hardy, there is promise of further growth in captivity.

Early in January the Fairmount Park Aquarium in Philadelphia presented two female California sea lions about four years old. They occupy one of the large floor pools and at the close of the year remain in good condition.

Important donations of fishes were made by the New York Conservation Commission and the New Jersey Fish and Game Commission.

An exchange of marine fishes was made with the Detroit Aquarium whereby the New York Aquarium received 151 fishes of 23 species.



THE AQUARIUM IN 1892

Work was then in progress converting the old structure into an Aquarium.



THE AQUARIUM AS IT IS TO-DAY

This view was made from one of the upper stories of an office building facing Battery Park.

An exchange with the Philadelphia Aquarium brought to New York 21 fine specimens of the calico bass.

The U. S. Bureau of Fisheries and the New York Conservation Commission provided eggs of seven different kinds of fishes for the Aquarium hatchery. The fry were distributed to the states of New York and New Jersey.

Numerous specimens of the commoner fresh-water fishes were collected in the lakes of the city parks by the employes of the Aquarium.

Early in September employes of the Aquarium brought 600 fishes from Florida, representing 52 species. A second shipment in October was less successful, the bulk of the collection being lost on account of rough weather.

A complete list of accessions during the year will be found elsewhere in this report.

Limulus to Berlin.—At the request of Dr. V. Heinroth of the Aquarium located in the Zoological Gardens of Berlin, the New York Aquarium forwarded twenty specimens of the horse-shoe crab (*Limulus*), which is not found on the eastern Atlantic Coast. Although special arrangements were made for their care aboard ship, eleven of the specimens died in transit; but the remaining nine were in good condition and it is hoped they can be kept alive for a long time.

Exhibit of Fancy Goldfishes.—From October 10-12, inclusive, the Aquarium Society of New York held an exhibition of fancy goldfishes at the Aquarium, as had been done in 1919. It attracted much attention and many visitors, and emphasized more strongly than ever the desirability of such an exhibit as part of the permanent display of the Aquarium. With the enlargement of the building, it may become possible to exhibit various fishes for home aquaria, such as fancy goldfishes, small native fishes—dace, killies, sticklebacks, minnows, etc.—and many varieties of the brilliantly colored tropical toy fishes.

Jenny Lind Centennial Celebration.—From October 1-23, inclusive, the Executive Committee of the Jenny Lind Centennial Celebration Committee held an exhibition of the relics of the great Swedish singer at the Aquarium, where she first sang in America, in 1850. As already noted in the November *Bulletin*, the exhibition proved very popular and was viewed by 163,151

persons. Biographies, books of music, daguerreotypes, paintings, engravings, pianos, china busts, medals, autographs, and other relics were forwarded for the exhibition from Massachusetts, California, and other states. On October 6, the one hundredth anniversary of her birth, exercises were held in the building and presided over by Dr. Johannes Hoving, Chairman of the Committee. Cablegrams to and from King Gustaf of Sweden were read, addresses were made by Mr. W. A. F. Ekengren, Swedish Minister to the United States, Mr. Madison Grant as Chairman of the Executive Committee of the Zoological Society, and Director Townsend of the Aquarium; and excellent singing was rendered by the Swedish Singing Society Svea.

A marble bust of Jenny Lind, slightly larger than life size, which it had been rumored would be presented to the Aquarium by the city on the day of the exercises, did not arrive, but was presented by the Centennial Celebration Committee in January.

The only inscription it bears are the characters on the back, "W. v. Hoyer, Roma, F. 1848," and it has been an exceedingly difficult matter to gain any knowledge of the sculptor or as to where and under what circumstances the bust was made.

Jenny Lind, we are told, was never in Rome, and one account says that von Hoyer merely sent the bust to Rome to be done in marble. She brought the bust to America, but never carried it back to Europe, having given it to the lady with whom she lived on Staten Island. It was eventually sold and found its way to an art shop in New York, where the attention of the Committee was called to it.

About the sculptor practically nothing is known. Walton's Gallery of Sculpture contains an engraving of his statue of Psyche, which was the property of Queen Victoria, and a brief biographical notice in German states that he was a theological student at Rome and made numerous statues of idealistic subjects. He died in Dresden in 1873.

An examination of over sixty books on sculpture and German biography, revealed but two that mention von Hoyer, one stating that his name was Wilhelm, the other that it was Wolf. Even the *Allgemeine Deutsche Biographie*, a work of German biography in sixty volumes, contains no reference to this sculptor, and it is significantly sad that a man who could do work that was prized by Queen Victoria should be so little known to fame.



JENNY LIND

From a marble bust made by W. V. Hoyer, Rome, 1848. Presented to the New York
Aquarium by the Jenny Lind Centennial Celebration Committee.
Photograph by Elwin R. Sanborn.

Perhaps his bust of Jenny Lind, now reposing permanently at the Aquarium, will gain for him the honors which elusive Fame seems hitherto to have been so shy in bestowing. (I. M. M.)

Aid to Schools and Teachers.—The Aquarium this year distributed to thirty-four schools nearly eight hundred small marine animals for school aquaria, besides supplying the eggs of fishes to various institutions for embryological study. The number of school children visiting the Aquarium with their teachers was 7,808.

Improvements.—An important improvement early in the year was the renewal of the numerous lead pipes forming the drainage bed of the salt water gravity filters, which had become irreparably corroded. These large filters had rendered excellent service since their installation in 1908, and are now in condition for another long period of service.

Much needed repairs were made to both of the large steam boilers. The numerous skylights which have been deteriorating rapidly, were repaired for temporary use, but being badly corroded will require complete renewal before another winter sets in.

The women's lavatory was reconstructed and improved during the summer. The entire piping system having given way, the room was closed for many weeks.

The improvements to boilers, skylights and lavatory were all made by the city. The filter improvements were paid for from the Maintenance Fund.

Guide Book.—The Guide to the New York Aquarium, prepared by the Director, was placed on sale February 10. The number of copies sold during the year was 2,041, including numerous copies sent out in response to mail orders from distant parts of the country. The new Guide is a book of 170 pages, bound in boards. There are 160 illustrations, and the number of species referred to is 350.

Owing to the high cost of printing, the price of the Guide Book has been fixed at fifty cents, a price which probably restricts its sale to some extent. It is to be regretted that the paper used was not of the quality necessary to show the illustrations to good advantage.

Coal.—The consumption of coal during the year was 1,088 tons, the cost of which was \$9,916.03.

Budget.—The appropriation for the year 1920 was \$54,891. An increase on August 20 of \$2,934.56 applicable to salaries, and an issue of special revenue bonds at the close of the year to meet a deficit in supplies, amounting to \$3,360, were also granted.

Attendance.—The attendance, which had decreased somewhat during the war, has now returned to about what it was prior to 1915. The number of visitors in 1920 was 1,994,548, an increase over that of 1919 of 143,973. The daily average for the year was 5,449.

The total attendance at the Aquarium for the twenty-three years of its history exceeds forty-five millions.

ATTENDANCE AT THE AQUARIUM BY MONTHS, 1920.

January	visitors....	58,130	Daily average....	1,875
February	"	51,262	" "	1,767
March	"	106,607	" "	3,438
April	"	144,674	" "	4,822
May	"	174,466	" "	5,628
June	"	212,926	" "	7,097
July	"	248,683	" "	8,022
August	"	291,854	" "	9,414
September	"	253,542	" "	8,451
October	"	199,714	" "	6,442
November	"	133,277	" "	4,442
December	"	119,413	" "	3,852
Total	"	1,994,548	" "	5,449

Foulness of the Water of the Harbor.—Owing to the increasing pollution of the harbor, the Aquarium was compelled to install a system of pure stored sea water several years ago. The use of this water resulted in an immediate improvement in the health of the inmates of the Aquarium. Recent experiments made at the Aquarium indicate that the harbor is now so polluted by sewage that sea fishes cannot live in it more than a few days. This appears to be proved by the fact that fishes carried in the well of the Aquarium collecting boat must be promptly removed

to the exhibition tanks to avoid losses. All fishes left in the well of the boat while the vessel is moored behind the Aquarium die within two or three days. The low salinity of the harbor water, less than half that of the open sea, is shown in the following table:

RECORD OF MONTHLY MEAN TEMPERATURES AND SPECIFIC GRAVITIES OF THE WATER OF NEW YORK HARBOR AT THE BATTERY, DURING THE YEAR 1920*

	Temperature.	Specific Gravity.
January	39°	1.014
February	36°	1.015
March	38°	1.011
April	42°	1.007
May	49°	1.011
June	58°	1.012
July	65°	1.012
August	68°	1.013
September	69°	1.013
October	63°	1.013
November	56°	1.013
December	49°	1.010

The Supply of Fresh Water.—The following table of water temperatures, which has been prepared from daily records made at the Aquarium, is published with a view to convenient reference. The water supply of the City was increased and improved in 1917 by the addition of water from the Catskill Mountains.

An examination of the table indicates that the water flowing into the Aquarium since that time has a temperature somewhat lower in summer and higher in winter than was formerly the case. The greater equability is probably due to the fact that the temperature of the naturally cooler mountain water is modified by flowing a much greater distance underground. For the purposes of the Aquarium the greater equability is desirable.

*From daily observations made at the New York Aquarium by Mr. W. I. DeNyse. Specific gravity observations were made with the samples of water brought to a temperature of 60° Fahr.

RECORD OF MONTHLY AND YEARLY MEAN TEMPERATURES OF FRESH WATER ENTERING THE NEW YORK
AQUARIUM FROM 1910 TO 1920, INCLUSIVE*

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly Averages
1910....	39	39	42	50	57	63	69	72	71	65	51	40	54
1911....	39	38	40	46	59	69	74	75	72	63	52	44	55
1912....	39	37	40	48	57	68	75	72	68	63	54	46	55
1913....	43	41	42	50	..	..	67	71	70	65	56	48	55
1914....	41	38	40	45	53	60	67	71	70	65	54	43	53
1915....	39	38	40	47	53	59	65	69	70	63	54	42	53
1916....	38	37	36	43	52	56	64	69	69	63	55	45	52
1917....	37	36	39	44	50	57	62	65	64	58	49	39	50
1918....	35	37	39	44	55	56	58	64	66	59	52	42	50
1919....	39	38	40	45	54	60	64	67	66	63	54	43	52
1920....	37	37	39	43	51	61	66	68	67	63	54	45	52
Monthly Average	38	37	39	45	54	60	66	68	68	67	53	43	52

*From daily observations made by Mr. W. I. DeNyse.

Refrigeration of Fresh Water.—It has always been necessary to operate a refrigerating plant at the Aquarium during the summer months, for the benefit of northern species of fishes. It is kept in operation as long as the water temperature remains above sixty degrees Fahrenheit. Since 1917 it has been possible to shorten the period during which refrigeration is required, as may be seen by an examination of the following table:

RECORD OF ANNUAL PERIOD OF OPERATION OF THE REFRIGERATING PLANT OF THE NEW YORK AQUARIUM, FROM 1907 TO 1920.*

<i>Year</i>	<i>Started</i>	<i>Stopped</i>	<i>Days in Operation</i>	
1907	June 14	October 22	130	
1908	May 25	November 4	164	
1909	May 17	October 8	145	Average days, 163
1910	May 21	November 9	173	
1911	May 15	November 13	182	
1912	May 15	November 13	182	
1913	June 12	November 14	156	
1914	May 23	October 31	162	Average days, 128
1915	May 20	November 8	173	
1916	May 29	November 13	169	
1917	June 25	October 14	112	
1918	July 19	October 14	88	
1919	May 31	November 6	160	
1920	June 3	November 4	155	

OBITUARY

Mr. W. I. DeNyse, who had been connected with the Aquarium in the capacity of Aquarist since its opening on December 10, 1896, died January 1, 1921, at the age of 61 years.

Respectfully submitted,

CHAS. HASKINS TOWNSEND,
Director.

*From records kept by Mr. James C. Moore, Chief Engineer.

Treasurer's Reports

FOR THE YEAR ENDING DECEMBER 31, 1920.

Income Account

Schedule 1.

Unexpended balance as of December 31, 1919:		
Available for expenditure during 1920.....	\$945.89	
Investments:		
\$1,000 New York, Lackawanna & Western		
Terminal 4% Bonds.....	990.00	\$1,935.89
	RECEIPTS.	
Annual Dues	\$17,080.00	
Sustaining Memberships	160.00	
Endowment Fund Income Account (transfer)...	16,919.23	
Sage Endowment Fund Income Acct. (transfer)	14,272.13	
Special Maintenance Fund 1920 (transfer)....	13,713.08	
Interest on bank balances.....	1,008.07	
Interest on investments.....	40.00	
Special Subscriptions:		
American Museum Natural History..	\$400.00	
Percy R. Pyne.....	1,000.00	
Miscellaneous	10.00	
	1,410.00	64,602.51
		\$66,538.40
	EXPENDITURES.	
Annual and separate reports.....	\$5,470.13	
Bulletin	9,850.10	
Photographs and slides.....	512.67	
Zoologica	496.80	
Zoopathologica	285.83	
Expenses, Annual Meeting.....	892.80	
Expenses of receptions.....	1,330.97	
Treasurer's office expenses.....	1,600.00	
General office expenses.....	5,586.87	
Audit of accounts.....	1,000.00	
Liability insurance	381.01	
Salary of Secretary.....	5,000.00	
Aquarium expenses	741.97	
Office supplies and printing.....	3,956.52	
Aquarium specimens	1,654.02	
Aid to employees.....	2,190.00	
Pension Fund Income Account.....	3,665.00	
Insurance	743.21	
Aquarium collecting launch.....	1,555.03	
Carried forward	\$46,912.93	

<i>Brought forward</i>	\$46,912.93	
Aquarium tanks	2,540.00	
Preparation and mailing circulars.....	1,917.00	
Special Maintenance Fund 1920 (transfer).....	2,000.00	
City Fund	715.00	
Aquarium Fund (transfer).....	407.07	
Library Fund (transfer).....	350.00	
Heads and Horns Fund (transfer).....	300.00	
Miscellaneous expenses	2,106.42	57,248.42
Unexpended balance as of December 31, 1920....		9,289.98
		<u>\$66,538.40</u>

H. R. MITCHELL,
Chief Clerk.
January 1, 1921.

PERCY R. PYNE,
Treasurer.

Maintenance Fund ZOOLOGICAL PARK

Schedule 2.

RECEIPTS.

Received from the City on account of Park Maintenance Appropriation of \$237,930.97 for the year	\$219,387.01	
Due from the City on account of Park Maintenance Appropriation	18,543.96	\$237,930.97
Received from the City on account of Special Revenue Bonds of \$12,612.41 for increasing salaries of employees from August 20, 1920.....	10,765.26	
Due from the City on account of Special Revenue Bonds allowed as above.....	1,392.04	
Balance Special Revenue Bonds unexpended....	455.11	12,612.41
Shortage paid from funds of the Zoological Society: Transferred from Income Account from subscription to Special Maintenance 1920.....	1,443.80	
Salary Bonuses paid Park employees from Special Maintenance 1920.....	2,236.92	3,680.72
		<u>\$254,224.10</u>

EXPENDITURES.

Maintenance of buildings and care of collections.	\$76,760.55
Maintenance and care of grounds.....	69,476.06
General administration	25,139.49
Food for animals.....	42,560.22
Fuel	15,864.05
Lumber	2,231.32
Uniforms and miscellaneous wearing apparel....	2,085.32
Plumbing repairs	1,599.68
Paints and oils.....	1,461.59
<i>Carried forward</i>	<u>\$237,178.28</u>

<i>Brought forward</i>	\$237,178.28	
Electric service	1,241.99	
Miscellaneous supplies	1,198.96	
Plumbing materials	1,019.63	
Stationery and printing	802.68	
Telephone service	725.82	
Tools and machinery	698.10	
Miscellaneous equipment	673.00	
Miscellaneous materials	646.41	
Motor vehicle supplies	566.34	
Office supplies	535.09	
Steel and iron	518.56	
Motor vehicles and equipment	432.14	
Sand, cement and brick	389.00	
Janitors' equipment	385.90	
Glaziers' materials	367.98	
Fuel oil	327.54	
Miscellaneous repairs	309.35	
Janitors' supplies	299.93	
Fencing and netting	264.40	
Motor vehicle materials	247.84	
Drugs and medicines	245.42	
Bolts, nails and hardware	222.46	
Disinfectants	208.12	
Rubber hose	171.20	
Expressage and deliveries	162.69	
Painting labels	161.00	
Electrical materials	154.35	
Painters' equipment	149.87	
Ice	138.90	
Medical attendance, employees	134.00	
Nursery stock and seeds	130.35	
Sanitary Service	130.00	
Furnace repairs and replacements	121.25	
Motor vehicle repairs	89.89	
Miscellaneous expenses	89.10	
Apparatus and machinery repairs	70.67	
Nursery supplies	64.68	
Lubricating oils	62.70	
Harness and vehicle repairs	58.25	
Medical and surgical supplies	43.26	
Gas service	27.61	
Office equipment	27.31	
Awnings and shades	21.45	
Medical equipment	9.60	
Mats and floor coverings	9.00	\$251,532.07
<hr/>		
Salary bonuses paid Park employees from Special Maintenance, 1920		2,236.92
Unexpended balance of Special Revenue Bonds for increasing salaries August 20, 1920, reverting to the City, account not available for other purposes		455.11
		<hr/>
		\$254,224.10

H. R. MITCHELL,
Chief Clerk.

PERCY R. PYNE,
Treasurer.

January 15, 1921.

Animal Fund

Schedule 3.

Unexpended balance as of December 31, 1919:		
Cash in bank.....	\$39,604.39	
Cash on hand.....	100.00	\$39,704.39

RECEIPTS.

Junior Auxiliary		600.00
Receipts from Park:		
Sale of animals.....	\$638.00	
Checking	25.99	
Miscellaneous	128.43	
Privilege Account, account 1920 receipts.....	20,000.00	
Boating, account 1920 receipts.....	10,000.00	30,792.42
		<hr/>
		\$71,096.81

EXPENDITURES.

Mammals	\$10,788.89	
Birds	16,141.81	
Reptiles	1,951.20	
Insect collection	71.65	\$28,953.55
		<hr/>
Express and other charges.....	1,767.81	
Traveling and other expenses.....	2,039.72	3,807.53

Unexpended balance as of December 31, 1920:		
Cash in bank.....	38,235.73	
Cash on hand.....	100.00	38,335.73
		<hr/>
		\$71,096.81

H. R. MITCHELL,
Chief Clerk.
January 1, 1921.

PERCY R. PYNE,
Treasurer.

Stokes Bird Fund

Schedule 4.

Funds as of December 31, 1919:		
Unexpended balance	\$658.54	
Investment: \$5,000 Illinois Central Railway 4% Gold Bonds.....	5,056.46	\$5,715.00

RECEIPTS.

Interest on investment.....		200.00
		<hr/>
		\$5,915.00

EXPENDITURES.

Preservation of bird life.....		\$500.00
Funds as of December 31, 1920:		
Investment: \$5,000 Illinois Central Railway 4% Gold Bonds.....	\$5,056.46	
Unexpended balance	358.54	5,415.00
		<hr/>
		\$5,915.00

H. R. MITCHELL,
Chief Clerk.
January 1, 1921.

PERCY R. PYNE,
Treasurer.

National Collection of Heads and Horns

Schedule 5.

Unexpended balance as of December 31, 1919....	\$68.89
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RECEIPTS.

Special Subscription: John J. Paul.....	\$50.00	
Income Account (transfer).....	300.00	350.00
		\$418.89

EXPENDITURES.

Heads and horns.....	\$257.50	
Express and other charges.....	6.36	\$263.86

Unexpended balance as of December 31, 1920....	155.03
	\$418.89

H. R. MITCHELL,
Chief Clerk.
January 1, 1921.

PERCY R. PYNE,
Treasurer.

Library Fund

Schedule 6.

Unexpended balance as of December 31, 1919....	\$67.41
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RECEIPTS.

Income Account (transfer).....	350.00
	\$417.41

EXPENDITURES.

Subscriptions to periodicals.....	\$90.85	
Books, pamphlets, etc.....	288.02	\$378.87

Unexpended balance as of December 31, 1920....	38.54
	\$417.41

H. R. MITCHELL,
Chief Clerk.
January 1, 1921.

PERCY R. PYNE,
Treasurer.

Maintenance Fund

NEW YORK AQUARIUM

Schedule 7.

RECEIPTS.

Received from City on account of Aquarium Maintenance Appropriation of \$54,891.00 for the year	\$48,953.86	
Due from City on account of Aquarium Maintenance Appropriation	5,017.62	
Unexpended balance to revert to City.....	919.52	\$54,891.00
<i>Carried forward</i>		\$54,891.00

<i>Brought forward</i>		\$54,891.00
Received from City on account of Special Revenue Bonds of \$2,934.56 for increase in salaries of employees from August 20, 1920.....	\$2,266.66	
Due from City on account of Special Revenue Bonds allowed as above.....	667.90	2,934.56
Due from City on account of Special Revenue Bonds of \$3,360.00 for supplies.....		3,360.00
		<hr/> \$61,185.56

EXPENDITURES.

Salaries	\$42,054.51	
Forage and veterinary supplies.....	3,550.21	
Fuel	9,916.03	
Office supplies	126.00	
Laundry, cleaning and disinfecting supplies....	132.68	
Refrigerating supplies	109.46	
General plant supplies.....	391.40	
Office equipment	9.00	
Wearing apparel	220.79	
General plant equipment.....	873.30	
General plant materials.....	569.79	
Repairs	1,244.87	
Lighting	766.08	
Expressage and cartage.....	22.00	
Telephone service	139.92	
Contingencies	140.00	\$60,266.04
Reverting to City.....		919.52
		<hr/> \$61,185.56

S. A. CALLISEN,
Clerk.

January 12, 1921.

PERCY R. PYNE,
Treasurer.

Endowment Fund

Schedule 8.

Funds as of December 31, 1919:

Cash in bank.....	\$26,941.21	
Investments at cost.....	371,691.25	\$398,632.46

RECEIPTS.

Estate of John Leyden.....		194.75
Subscriptions received through Ladies' Auxiliary:		
Mrs. Wm. B. Osgood Field.....	\$250.00	
Mrs. Finley J. Shepard.....	100.00	
Miss Emily Buch	5.00	355.00
Life Memberships		2,900.00
		<hr/> \$402,082.21

Investments as of December 31, 1920, at cost:

\$27,000	U. S. Government Victory Loan 4¾%		
	Bonds	\$26,778.40	
20,000	Westchester Racing Association 5½%		
	First Mortgage Bonds.....	20,000.00	
3,000	Second Mortgage, Clara N. Gilbert and others, 6% over land and buildings, Broadway and 17th Street.....	3,000.00	
5,000	Colorado & Southern 4% Bonds.....	4,750.00	
5,000	Michigan Central R.R. Co. 4% Bonds....	4,950.00	
10,000	New York City 1957 Corporate Stock 4%	9,925.00	
10,000	New York City 1957 Corporate Stock 4%	9,962.50	
20,000	New York City 1958 Corporate Stock 4%	19,875.00	
10,000	New York City 1958 Corporate Stock 4%	9,962.50	
13,400	New York City 1965 4½% Corporate Stock	13,651.25	
10,000	St. Paul, Minneapolis & Manitoba 4%		
	Bonds	9,800.00	
50,000	U. S. Steel Sinking Fund 5% Bonds.....	51,812.50	
50,000	American Telephone & Telegraph 4%		
	Bonds	45,000.00	
25,000	Rhode Island Suburban Ry. Co. 4%		
	Bonds	21,250.00	
20,000	Chicago & Northwestern Ry. Co. 4%		
	Bonds, General Mortgage.....	19,750.00	
20,000	Vandalia Railroad Co. Consolidated Mortgage 4% Bonds.....	19,400.00	
5,000	Missouri & Illinois Bridge & Belt R.R. Co. 1st Mortgage 4% Bonds.....	5,000.00	
10,000	Chicago, Milwaukee & Puget Sound 1st Mortgage 4% Bonds.....	9,525.00	
12,000	Chicago, Milwaukee & Puget Sound 1st Mortgage 4% Bonds.....	11,250.00	
10,000	New York, Lackawanna & Western 4%		
	Terminal Improvement Bonds.....	9,900.00	
20,000	Milwaukee, Sparta & Northwestern 1st Mortgage 4% Bonds.....	18,900.00	
25,000	New York & Westchester Lighting Co. General Mortgage 4% Gold Coupon Bonds	19,750.00	
1,000	Morris & Essex R.R. 3½% Bond.....	876.25	
5,000	Illinois Central and Chicago, St. Louis & New Orleans 5% Bonds.....	5,000.00	
9,000	Baltimore & Ohio (Pittsburgh, Lake Erie & West Virginia) Ry. 4% Refunding Bonds	7,920.00	
9,000	Lehigh Valley Terminal 5% Bonds.....	9,090.00	
3,000	Central Railroad of New Jersey 5%		
	Bonds	3,031.25	
7,000	United New Jersey R.R. & Canal 4%		
	Bonds	6,230.00	
4,000	Baltimore & Ohio 1st Mortgage 4% Bonds	3,120.00	\$399,459.65
Uninvested balance as of December 31, 1920.....			2,622.56
			<u>\$402,082.21</u>

H. R. MITCHELL,
Chief Clerk.
January 1, 1921.

PERCY R. PYNE,
Treasurer.

Endowment Fund Income Account

Schedule 9.

RECEIPTS.

Interest collected from Endowment Fund investments.....	\$16,919.23
	<hr/>
	\$16,919.23

EXPENDITURES.

Income Account (transfer).....	\$16,919.23
	<hr/>
	\$16,919.23

H. R. MITCHELL,
Chief Clerk.

PERCY R. PYNE,
Treasurer.

January 1, 1921.

Cadwalader Animal Fund

Schedule 10.

Funds as of December 31, 1919:

Unexpended balance	\$945.53	
Investment: \$20,000 (at par) Illinois Central and Chicago, St. Louis & New Orleans joint 5% Bonds	20,000.00	\$20,945.53
	<hr/>	

RECEIPTS.

Interest on investment.....	1,000.00
	<hr/>
	\$21,945.53

EXPENDITURES.

Miscellaneous expenses		\$248.95
Funds as of December 31, 1920:		
Investment: \$20,000 (at par) Illinois Central and Chicago, St. Louis & New Orleans joint 5% Bonds	\$20,000.00	
Unexpended balance	1,696.58	21,696.58
	<hr/>	
		\$21,945.53

H. R. MITCHELL,
Chief Clerk.

PERCY R. PYNE,
Treasurer.

January 1, 1921.

Wild Life Fund

Schedule 11.

Unexpended balance as of December 31, 1919.....	\$981.31
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RECEIPTS.

Sale of "Our Vanishing Wild Life".....	91.24
	<hr/>
	\$1,072.55

EXPENDITURES.		
Miscellaneous expenses	\$2.00	
Telegraph and express.....	4.83	6.92
		<hr/>
Unexpended balance as of December 31, 1920....		1,065.63
		<hr/>
		\$1,072.55

H. R. MITCHELL,
Chief Clerk.
 January 1, 1921.

PERCY R. PYNE,
Treasurer.

Improvement and Repair Account

Schedule 12.

Unexpended balance as of December 31, 1919.....	\$12,880.86
RECEIPTS.	
Gate Receipts	16,019.75
	<hr/>
	\$28,900.61

EXPENDITURES.		
Lion House boiler.....	\$2,276.40	
Lion House ceiling.....	114.45	
Children's playground	100.00	
Fence renewals	1,425.13	
Blackbird cages	427.50	
Boiler repairs	2,180.59	
Guard rails	828.90	
Walk repairs	5,240.12	
Parrot cages	1,111.62	
Lion House cages.....	105.60	
Miscellaneous	3,627.97	\$17,438.28
	<hr/>	
Unexpended balance as of December 31, 1920....		11,462.33
		<hr/>
		\$28,900.61

H. R. MITCHELL,
Chief Clerk.
 January 1, 1921.

PERCY R. PYNE,
Treasurer.

Carnegie Pension Fund

Schedule 13.

Funds as of December 31, 1919:	
Investments at cost.....	\$100,066.25
Funds as of December 31, 1920:	
Investments at cost:	
\$25,000 Philadelphia & Baltimore 1st Mortgage	
4% Gold Bonds.....	\$23,250.00
25,000 Lehigh Coal & Navigation 4½% Bonds..	24,875.00
25,000 Illinois Central 4% Bonds.....	23,062.50
	<hr/>
Carried forward	\$71,187.50

<i>Brought forward</i>	\$71,187.50	
5,000 Morris & Essex 3½% Bonds.....	4,373.75	
25,000 Chicago & Northwestern 4% Bonds.....	23,687.50	
1,000 Michigan Central 3½% Bond.....	817.50	\$100,066.25

H. R. MITCHELL,
Chief Clerk.
January 1, 1921.

PERCY R. PYNE,
Treasurer.

Pension Fund Income Account

Schedule 14.

Uninvested balance as of December 31, 1919:

Deposited with Farmers' Loan & Trust Co....	\$8,633.02	
Deposited with Corn Exchange Bank (Bronx)	239.03	\$8,872.05

Investments at cost..... 48,972.50

RECEIPTS.

Interest on bank balances.....		\$132.47
Interest on bond investments.....		2,661.30
Dues collected from Zoological Society Employees.....		3,490.24
Contributed by New York Zoological Society:		
Interest on Carnegie Pension Fund Investments	\$4,335.00	
Cash payments, year 1920.....	3,665.00	8,000.00

\$72,128.56

EXPENDITURES.

Refund of dues with accrued interest to resigning members	\$951.61	
Pension payments	2,967.88	
Clerical services and expenses.....	401.13	
Declining insurance	263.55	
Physical examinations (made by Dr. G. J. Vander Smissen)	80.00	4,664.17

Investments at cost:

\$5,000 New York City 4½% Bonds.....	\$5,093.75	
5,000 Illinois Central & Chicago, St. Louis & New Orleans Ry. joint 5% Bonds.....	4,981.25	
5,000 Milwaukee, Sault Sainte Marie & Atlantic Ry. first 4% Bonds.....	4,868.75	
4,000 Baltimore & Ohio (Pittsburgh, Lake Erie & West Virginia) Ry. 4% Refunding Bonds	3,520.00	
5,000 Twenty-third Street Improvement & Refunding 5% Bonds	4,825.00	
6,000 United New Jersey Ry. & Canal 4% 1923 Bonds	5,925.00	
5,000 U. S. Government Second Loan 4¼% Liberty Bonds	5,000.00	
6,000 Baltimore & Ohio Ry. 1st Mortgage 1948 4% Bonds	4,680.00	

Carried forward \$38,893.75

<i>Brought forward</i>	\$38,893.75	
7,000 Chicago, Milwaukee & St. Paul 4½% Bonds	5,368.75	
5,000 U. S. Government Fourth Loan 4½% Converted Liberty Bonds.....	4,710.00	
*8,600 U. S. Government Victory Loan 4¾% Bonds	8,530.32	
*10,000 U. S. Government Second Loan 4¼% 1942 Bonds	8,576.25	66,079.07
<hr/>		
Uninvested balance as of December 31, 1920:		
Deposited with Farmers' Loan & Trust Co....	\$1,353.72	
Deposited with Corn Exchange Bank (Bronx)	31.60	1,385.32
<hr/>		\$72,128.56
H. R. MITCHELL, <i>Chief Clerk.</i> January 1, 1921.	PERCY R. PYNE, <i>Treasurer.</i>	

*Purchased during 1920.

Tropical Research Fund

Schedule 15.

Unexpended balance as of December 31, 1919..... \$153.65

RECEIPTS.

Special Subscriptions:

Anthony R. Kuser.....	\$2,000.00	
E. C. Converse.....	1,000.00	
George J. Gould.....	1,000.00	
Edward S. Harkness.....	1,000.00	
A. Barton Hepburn.....	1,000.00	
Mortimer L. Schiff.....	1,000.00	
C. Ledyard Blair.....	500.00	
Cleveland H. Dodge.....	500.00	
American Museum of Natural History.....	450.00	8,450.00
<hr/>		\$8,603.65

EXPENDITURES.

Salary of directing curator and assistant.....	\$3,318.33	
Miscellaneous expenses	4,605.65	\$7,923.98
<hr/>		679.67
Unexpended balance as of December 31, 1920....		\$8,603.65

H. R. MITCHELL,
Chief Clerk.
January 1, 1921.

PERCY R. PYNE,
Treasurer.

Art Gallery Fund

Schedule 16.

Unexpended balance as of December 31, 1919..... \$7,221.68
No receipts during 1920.

EXPENDITURES.

Oil paintings	\$1,938.77	
Prints and engravings.....	200.00	\$2,138.77
Unexpended balance as of December 31, 1920....		5,082.91

\$7,221.68

H. R. MITCHELL,
Chief Clerk.
January 1, 1921.

PERCY R. PYNE,
Treasurer.

Publication Fund

Schedule 17.

Unexpended balance as of December 31, 1919.....	\$1,707.28
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RECEIPTS.

Sale of paper stock.....	\$136.85	
Sale of "Tropical Wild Life in British Guiana"..	51.89	188.74
		\$1,896.02

No expenditures during 1920.

Unexpended balance as of December 31, 1920.....	\$1,896.02
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H. R. MITCHELL,
Chief Clerk.
January 1, 1921.

PERCY R. PYNE,
Treasurer.

Heads and Horns Building Fund

Schedule 18.

Funds as of December 31, 1919:

Investments at cost.....	\$80,360.57	
Cash in bank.....	4,215.23	\$84,575.80

RECEIPTS.

Special Subscription:		
John D. Archbold.....		10,000.00
Interest on investments.....		2,828.75
		\$97,404.55

EXPENDITURES.

Architects' fees, etc.....	\$5,007.00
Funds as of December 31, 1920:	

Investments at cost:

\$79,000 U. S. Government First 3½% Liberty Bonds	\$78,912.81	
1,500 U. S. Government Fourth 4¼% Liberty Bonds	1,447.76	
100 shares Standard Oil Co. of New Jersey 7% Preferred Stock	10,375.00	90,735.57

Uninvested balance as of December 31, 1920.....	1,661.98
---	----------

\$97,404.55

H. R. MITCHELL,
Chief Clerk.
January 1, 1921.

PERCY R. PYNE,
Treasurer.

Special Maintenance Fund, 1920

Schedule 19.

RECEIPTS.

Special Subscriptions:

George F. Baker.....	\$1,000.00	
E. C. Converse.....	1,000.00	
Coleman Du Pont.....	1,000.00	
George J. Gould.....	1,000.00	
Edward S. Harkness.....	1,000.00	
A. Barton Hepburn.....	1,000.00	
Anthony R. Kuser.....	1,000.00	
Emerson McMillan.....	1,000.00	
George D. Pratt.....	1,000.00	
Percy A. Rockefeller.....	1,000.00	
Mortimer L. Schiff.....	1,000.00	
C. Ledyard Blair.....	500.00	
Robert S. Brewster.....	500.00	
C. F. Dieterich.....	500.00	
Cleveland H. Dodge.....	500.00	
Lispenard Stewart.....	500.00	
Wm. B. Osgood Field.....	250.00	
Edwin Thorne.....	100.00	
William Woodward.....	100.00	
Income Account (transfer).....	2,000.00	\$15,950.00

EXPENDITURES.

Salary Bonuses.....	\$2,236.92	
Income Account (transfer).....	13,713.08	\$15,950.00

H. R. MITCHELL,
Chief Clerk.
January 1, 1921.

PERCY R. PYNE,
Treasurer.

Sage Endowment Fund

Schedule 20.

RECEIPTS.

Estate of Margaret Olivia Sage:

Cash.....	\$289,663.95	
Bonds at market value April 30, 1920.....	48,910.00	
Stocks at market value April 30, 1920.....	149,771.88	
Accrued interest on Bonds to May 19, 1920....	1,165.00	\$489,510.83

EXPENDITURES.

Investments as of December 31, 1920:

Bequest at market value, April 30, 1920:

Bonds as follows:

\$19,000 New York Telephone Co. 1st Mortgage 4½%.....	\$14,155.00
10,000 Oregon-Washington R.R. & Navigation Co. 1st Mortgage 4%.....	6,500.00
7,000 Washington Terminal Co. 1st Mortgage 3½%.....	4,830.00
Carried forward.....	\$25,485.00

<i>Brought forward</i>	\$25,485.00	
7,000 Central New England Ry. Co. 1st Mortgage 4%	3,675.00	
6,000 Baltimore & Ohio R.R. Co. Prior Lien 3½%	4,860.00	
6,000 Erie R.R. Co. Prior Lien 4%	3,015.00	
Stocks as follows:		
400 shares American Telephone & Telegraph Co.	37,775.00	
250 shares U. S. Steel Corporation preferred... ..	27,359.38	
200 shares Atchison, Topeka & Santa Fe Ry. Co. preferred	14,525.00	
100 shares Union Pacific R.R. Co. preferred....	6,237.50	
100 shares American Telegraph & Cable Co.....	5,075.00	
52 shares Bankers' Trust Co.....	19,500.00	
10 shares Importers & Traders' National Bank.	5,600.00	
Purchases at cost:		
\$300,000 U. S. Government Victory Loan 4¾% Bonds	288,835.00	
454 shares Standard Oil Co. of New Jersey 7% Preferred Stock	45,701.91	\$487,643.79
Loss on sale of investments bequeathed.....		29.50
Uninvested balance as of December 31, 1920.....		1,837.54
		<hr/>
		\$489,510.83

H. R. MITCHELL,
Chief Clerk.
January 1, 1921.

PERCY R. PYNE,
Treasurer.

Sage Endowment Fund Income Account

Schedule 21.

RECEIPTS.

Income collected from Sage Endowment Fund investments	\$14,272.13
	<hr/>
	\$14,272.13

EXPENDITURES.

Income Account (transfer)	\$14,272.13
	<hr/>
	\$14,272.13

H. R. MITCHELL,
Chief Clerk.
January 1, 1921.

PERCY R. PYNE,
Treasurer.

MARWICK, MITCHELL & CO.

ACCOUNTANTS AND AUDITORS
79 WALL STREET
NEW YORK

Auditors' Certificate

We have audited the books and accounts of the New York Zoological Society and of the Carnegie Pension Fund for the year ended December 31, 1920, and certify that the foregoing Schedules 1 to 21 are in accordance with the books and correctly record the transactions relating to the funds of the Society and the Carnegie Pension Fund for the year 1920 and the condition of the other funds as at December 31, 1920.

The subscriptions, donations and dues reported as received and the income from investments have been properly accounted for and the securities and cash on hand at December 31, 1920, as shown in the accounts of the funds presented herewith have been checked and found in order. Satisfactory vouchers have been produced for all expenditures.

MARWICK, MITCHELL & Co.,
Chartered Accountants.

March 29, 1921.

Report of the Auditing Committee

OF THE

NEW YORK ZOOLOGICAL SOCIETY

To the President and Board of Managers
of the New York Zoological Society:

Dear Sirs:

We beg to report we have examined the annual audit of the books and accounts of the New York Zoological Society for the year ending December 31, 1920, as made by Messrs. Marwick, Mitchell & Company, Chartered Accountants, and herewith submit the same to you as a complete and satisfactory audit of said books and accounts, including the Carnegie Pension Fund and the Pension Fund and the Pension Fund Income Account, all expenditures and receipts of the various accounts being clearly set forth, and it appearing that the cash on hand and at the various depositories has been verified and found correct, and all securities in which the funds of the Society are invested have been examined and found as reported.

Expenditures made through the Park Department of the City of New York have not been verified by this audit as such moneys have not passed through the hands of this Society, but are in due course checked and verified by the Comptroller of the City.

Respectfully submitted,

W. W. NILES, *Chairman*,
W. REDMOND CROSS.

List of Accessions, 1920

BY THE ZOOLOGICAL SOCIETY

AT THE ZOOLOGICAL PARK

BY GIFT.

- AGNEW, C. R., Armonk, N. Y.:
Barn Owls (3 specimens).
- AGRESTA, MISS HAZEL, New York City:
Diamond-Back Terrapin.
- ALMY, C. D., New York City:
Agouti.
- AMERICAN MUSEUM OF NATURAL HISTORY, New York City:
Banded Rattlesnake.
- ARCHIBALD, WARREN, New Kingston, N. Y.:
Albino Woodchuck.
- BAKER, MRS. E. R. W., New York City:
Yellow-Headed Amazon.
- BARTELS, HENRY, New York City:
Boa Constrictors (18 specimens).
- BARTINDALE, MRS. J. W., San Francisco, Calif.:
Rhesus Monkey.
- BATTENFELD, R., New York City:
1 Vervet Monkey, 1 Bonnet Macaque.
- BAXTER, DON A., New York City:
Lioness.
- BEECHER, LYMAN, New York City:
3 Mud Turtles, 1 Painted Turtle.
- BERGER, ISIDORE, New York City:
Canary.
- BESSIE, ALVAH C., New York City:
1 Painted Turtle, 1 South Carolina Chameleon, 1 Texas Horned Lizard,
1 Snapping Turtle, 1 Box Tortoise. Total, 5 specimens.
- BORDEN, SETH A., Fall River, Mass.:
4 Silver Pheasants, 3 Melanotus Pheasants, 1 Silver-Melanotus Pheasant,
1 Hybrid Japanese Pheasant. Total, 9 specimens.
- BRANNIGAN, FRANCIS, Bloomfield, N. J.:
Painted Turtle.
- BRIGHT, HERBERT, Liverpool, England:
2 Pileated Jays, 1 Giant Wydah.
- BROWN, MRS. W., Hackensack, N. J.:
Blue-Fronted Amazon Parrot.
- CABELLERO, REV. FATHER, New York City:
1000 White Rats, 736 White Mice, 9 Pigeons, 5 Guinea Pigs, 4 Rabbits.
Total, 1754 specimens.
- CARTHY, FRAZER E., New York City:
European Quail.

- CITY OF DENVER, through Albion K. Vickery, Supt. of Parks, Colorado:
Rocky Mountain Sheep (2 specimens).
- COHEN, ROBERT, New York City:
1 King Snake, 1 Pilot Blacksnake.
- COLBURN, ALBERT E., Los Angeles, Calif.:
Leopard Lizards (7 specimens).
- COLDERON, LUIS, New York City:
Red-Headed Cardinal.
- CREW OF THE U. S. S. *Cormorant*, Brooklyn, N. Y.:
Frigate Bird.
- CROSBY, MAUNSELL S., Rhinebeck, N. Y.:
Raccoon.
- DAVIES, ALLEN B., New York City:
Red-Fronted Amazon.
- DICKSON, JACKSON, Fort Sill, Okla.:
Collared Lizards (2 specimens).
- DONNELLY, MRS. CHARLOTTE, Mount Vernon, N. Y.:
Hooded Sapaïou.
- DOWLING, P., U. S. S. *Sacramento*, New York City:
Black Spider Monkey.
- EDWARDS, F. D., New York City:
White-Winged Parrakeet.
- EGGLESTON, MRS. GEORGE CARY, New York City:
Blue-Fronted Amazon.
- ELTON BOYS' BRIGADE, New York City:
3 Ribbon Snakes, 1 Green Snake, 1 Water Snake, 1 Wood Tortoise, 5
Spotted Turtles, 3 Painted Turtles, 1 Mud Turtle. Total, 15 specimens.
- ELTON BOYS' BRIGADE AND GIRLS' HOSPITAL CORPS, New York City:
1 Blacksnake, 1 Striped Snake.
- EVEREST, ROBERT, New York City:
Rhesus Monkeys (4 specimens).
- FISHER, MISS A., New York City:
Tovi Parrakeet.
- FITZ SIMONS, MRS. PAUL, Newport, R. I.:
2 Red-and-Blue Macaws, 2 Green-Winged Macaws.
- FOLZ, TED L., New York City:
Alligators (2 specimens).
- FREDENBERG, ADAM J., New York City:
Alligator.
- FROMER, MASTER PAUL, New York City:
Alligator.
- FROMKESS, C. S., New York City:
3 Painted Turtles, 1 Spotted Turtle.
- FUSSELL, WILLIAM, New York City:
Pilot Blacksnake.
- GABAY, FRED, New York City:
Tarantula.
- GILLAM, ARTHUR L., Flushing, L. I.:
13 Timber Rattlesnakes, 4 Banded Rattlesnakes, 6 Copperhead Snakes,
1 Hog-Nosed Snake. Total, 24 specimens.
- GOULD, JAY, New York City:
Rhesus Monkey.
- GRAVER, WALTER, New York City:
Guinea Pig.

- GREENLEAF, WILLARD J., New York City:
Pig-Tailed Monkey.
- GRIFFITH, F., Belmar, N. J.:
Spotted Turtles (2 specimens).
- GROSSINGER, JOHN F., Middleton, N. J.:
Great Horned Owl.
- GRUBER, L. M., New York City:
Sparrow Hawk.
- HARE, MEREDITH 2ND, AND MONTGOMERY 2ND, New York City:
Spike-Tailed Lizards (2 specimens).
- HARRIS, A. C., Mount Vernon, N. Y.:
Alligator.
- HARRIS, MYRON, Farmington, Conn.:
Great Horned Owl.
- HARTMAN, MASTER HENRY, Yonkers, N. Y.:
White Rats (8 specimens).
- HENNE, WILLIAM, New York City:
2 Cordon Bleus, 1 Fire Finch.
- HEYEN, F. D., Barryville, N. Y.:
Black Woodchuck.
- JANSSEN, MRS. G., Brooklyn, N. Y.:
Rhesus Monkey.
- JESSUP, WILLIAM C., Norwalk, Conn.:
Fox Squirrel.
- JOHNSON, J. N., Woodland, N. Y.:
2 Garter Snakes, 2 Green Snakes, 1 Storer's Red-Bellied Snake. Total,
5 specimens.
- JONES, W. W., New York City:
Alligator.
- JOSEPH, ELLIS S., Sydney, Australia:
1 Six-Plumed Bird of Paradise, 2 Black-Hooded Parrakeets, 1 Rein-
wardt Megapode, 2 New Guinea Pectoral Rails, 1 St. Helena Wax-
bill. Total, 7 specimens.
- JUNIOR AUXILIARY, New York Zoological Society, New York City:
Chapman-Burchell Zebra.
- KAMINUS, MRS., Brooklyn, N. Y.:
Belgian Hares (2 specimens).
- KEATING, W. D., New York City:
Night Heron.
- KENNA, MRS. J. E., New York City:
Cumberland Terrapin.
- KNIGHT, J. P., JR., New York City:
Coyote.
- KUSER, COL. ANTHONY R., Bernardsville, N. J.:
6 Ring-Neck Pheasants, 1 Silver Pheasant.
- LEVINSTEEN, DEPUTY COMMISSIONER, New York City:
Hog-Nosed Snake.
- LIVINGSTON, MISSES JANET AND HONORIA, Tivoli, N. Y.:
Angora Guinea Pig.
- LOOBY, DAVID, Jersey City, N. J.:
Raccoon.
- LUXENBERG, A. D., New York City:
Western Great Horned Owl.
- LYONS, RICHARD N., New York City:
Chipmunk.

- MCGOWAN, MRS. JOHN E., New Rochelle, N. Y.:
Barbary Turtle Doves (2 specimens).
- McLOUGHLIN, WILLIAM, New York City:
Great Horned Owl.
- McNEIL, MRS. GEORGE, Port Chester, N. Y.:
Alligator.
- McNULTA, MRS. NELLIE, New York City:
Black Squirrel.
- MADLEIGH, MASTER ROYAL, Montclair, N. J.:
Rhesus Monkey.
- MANDELBAUM, JULIUS, New York City:
Screech Owl.
- MARTIN, FRANCIS, New York City:
Northern Flicker.
- MARZELLA, MRS. M. R., New York City:
European Raven.
- METZ, TED, Erie, Pa.:
Bonnet Macaque.
- MINTZ, B., New York City:
Canary.
- MOETZ, GEORGE F. L., New York City:
Boa.
- MOORE, EUGENE MAXWELL, New York City:
Red Foxes (2 specimens).
- MOROSINI, MISS GUILIA, New York City:
Opossum.
- NASH, MRS. HOWARD F., Palson, Mont.:
Kinkajou.
- NEWMAN, D. H., Church Creek, Md.:
Barred Owl.
- NEW YORK AQUARIUM, New York City:
2 Box Tortoises, 1 Wood Tortoise, 1 Woodchuck. Total, 4 specimens.
- NEW YORK STATE CONSERVATION COMMISSION, New York City:
Yellow-Crowned Night Heron.
- NOACK, H. R., Oakland, Calif.:
Nicobar Pigeons (2 specimens).
- OBERDORFER, MISS GEORGETTE A., Yonkers, N. Y.:
Sapajou Monkey.
- OSGOOD, MRS. R. T., Hartsdale, N. Y.:
Gray Parrot.
- PARDOE, DR. J. B., Bound Brook, N. J.:
3 Painted Turtles, 1 Yellow-Bellied Turtle, 1 Garter Snake, 1 Boa Constrictor, 1 Blacksnake. Total, 7 specimens.
- PECETTI, MRS. R., Brooklyn, N. Y.:
Iberian Tortoise.
- PHELPS, MASTER GOUVERNEUR MORRIS, JR., New Rochelle, N. Y.:
Canada Porcupine.
- PODIN, REV. CARL, New York City:
South American Burrowing Owls (2 specimens).
- POLLEY, JACOB W. E., New York City:
Gray Squirrel.
- PORTER, CHARLES S., New York City:
Opossum.
- PUPILS OF THE CULVER MILITARY SCHOOL, Culver, Ind.:
2 Box Tortoises, 1 Painted Turtle, 1 Lesseuer's Terrapin, 1 Snapping Turtle. Total, 5 specimens.

- REA, MISS J. A., New York City:
Purple Gallinule.
- REDEN, J. R., New York City:
Snapping Turtle.
- RITTER, CHARLES F., Woodside, L. I.:
Rhesus Monkey.
- ROBINSON, MRS. EDWARD, New York City:
1 Black-Headed Gouldian Finch, 1 Red-Headed Gouldian Finch, 1 Red-Tailed Finch, 1 Bergalee. Total, 4 specimens.
- ROSS, E. W., Yonkers, N. Y.:
Red-Tailed Hawk.
- ROSS, MRS. J. R., New York City:
Canaries (2 specimens).
- SAXTAN, GEORGE W., Jersey City, N. J.:
Barn Owl.
- SCHLERETH, DR. S., New York City:
Cuban Parrot.
- SCHMIDT, MRS. H., New York City:
Herring Gull.
- SEELEY, ALBERT, New York City:
2 Milk Snakes, 1 Garter Snake.
- SELIGMAN, MISS HELEN L., New York City:
Diamond-Back Terrapin.
- SHARRETT, THOMAS BROOKS, Noroton, Conn.:
Raccoons (2 specimens).
- SHUMAN, MISS LAURA, New Rochelle, N. Y.:
Cayenne Jay.
- SMITH, GEORGE, New York City:
1 Boa Constrictor, 1 South American Tarantula.
- SNAKE KING, W. A., Brownsville, Texas:
1 Diamond Rattlesnake, 2 Scarlet King Snakes, 1 Female Texas Rattlesnake with 38 young. Total, 42 specimens.
- SNYDER, PAUL W., Bloomfield, N. J.:
2 Water Snakes, 1 Garter Snake, 1 Opossum. Total, 4 specimens.
- SOTEL, MRS. ROSE M., New York City:
Sparrow Hawk.
- SPEER, GUS, New York City:
Alligator.
- SPIVAK, JACOB, New York City:
South American Fox.
- STAFF OF ELECTRIC GARAGE, ARMY BASE, Brooklyn, N. Y.:
Northern Loon.
- STEPHAN, S. A., Cincinnati, Ohio:
White-Crowned Pigeons (2 specimens).
- STEVENS, A. W., Great Neck, L. I.:
Alligator.
- STUTSMAN, F. V., Hackettstown, N. J.:
1 Timber Rattlesnake, 1 Banded Rattlesnake, 1 Ring-Necked Snake, 14 Red Newts. Total, 17 specimens.
- SWARTZ, C. W. MORGAN, Onachita Parish, La.:
Cane-Brake Rattlesnake.
- TABENHOUSE, B., Houston, Texas:
Texas Coluber.
- TOWNSEND, E. C., New York City:
Alligator.
- TOWNSEND, EDWARD T., White Plains, N. Y.:
Opossum.

- TURNER, MRS. W., New York City:
Zebra Finches (2 specimens).
- VANDERBILT, HAROLD F., New York City:
Bald Eagle.
- VAN PELT, MRS. JAMES H., Brooklyn, N. Y.:
Least Bittern.
- VAUGHN, MRS. C. WHEATON, New York City:
Alligators (2 specimens).
- VILLA, SERGIO V., New York City:
Blue Tanagers (2 specimens).
- VON BUEHREN, GEORGE, Stonington, Conn.:
2 Blacksnakes, 2 Painted Turtles.
- WAKEM, MRS. J. E., New York City:
Cotton-Headed Marmoset.
- WALKER, LEWIS, Forest Hills, L. I.:
Evening Grosbeak.
- WALLING, GEORGE A., Faucett, Mo.:
11 Mourning Doves, 8 Barbary Turtle Doves, 3 White Turtle Doves.
Total, 22 specimens.
- WALTER, HERBERT, New York City:
Alligator.
- WALTHER, H., New York City:
Blue-Bird.
- WARNER, MISS MABEL CHARLOTTE, Chambersburg, Pa.:
Canada Porcupines (2 specimens).
- WARREN, GIRARD, Mount Vernon, N. Y.:
Alligator.
- WATSON, OSBORN L., Blackshear, Ga.:
Rhesus Monkey.
- WEBBER, JOSEPH, New York City:
Snowy Owl.
- WENZEL, EDWARD, New York City:
1 Copperhead Snake, 1 Banded Rattlesnake.
- WERRENATH, REINOLD, New York City:
Tui Parrakeet.
- WESTINGHOUSE, H. H., New York City:
Red-and-Blue Macaws (2 specimens).
- WHITE, MRS. ROCKWELL, New York City:
Barbary Turtle Dove.
- WHITMAN, MALCOLM D., New York City:
Puma.
- WILLIAMS, L. H., New York City:
Barn Owl.
- WILMOTT, GEORGE B., New York City:
Barbary Turtle Doves (4 specimens).
- WINKELMANN, C., New York City:
Tame Pigeons (2 specimens).
- ZIMMERMAN, G. D., New York City:
Yellow-Fronted Amazon.
- ZOOLOGICAL GARDENS OF AMSTERDAM, Holland:
Bare-Necked Fowl (2 specimens).
- ZOOLOGICAL SOCIETY OF LONDON, England:
2 Triangular-Spotted Pigeons, 1 Red Turtle Dove, 2 West African Quail
Finches, 2 Moor Hens, 3 Black-Backed Gulls, 2 European Magpies,
1 Black-Footed Penguin, 1 Water Rail, 1 Panda, 1 Patagonian
Cavy, 6 English Vipers, 6 Edible Frogs. Total, 28 specimens.

Library

BY GIFT.

JANET, CHARLES, Allone, France:
Zoological Papers—28 titles.

OSBORN, MRS. HENRY FAIRFIELD, New York City:
Story of My Boyhood and Youth, by John Muir.
The Mountains of California, by John Muir.
Stickeen, The Story of a Dog, by John Muir.
Our National Parks, by John Muir.
The Yosemite, by John Muir.
Steep Trails, by John Muir.

SIMPSON, CHARLES TORREY, Little River, Fla.:
In Lower Florida Wilds.

UNIVERSITY SOCIETY, INC., New York City:
Engravings of Habitat Bird Groups in the American Museum of
Natural History:
A Grebe Colony on Crane Lake, Saskatchewan.
White Pelicans on Klamath Lake.
Sandhill Cranes on the Kissimmee Prairies, Florida.
Wild Geese on Crane Lake, Saskatchewan.
Wild Turkeys in the Mountains of West Virginia.
The Duck Hawk on the Palisades of the Hudson.
A Cactus Desert and its Bird-Life.
Summer Bird-Life of Cobb's Island, Virginia.

National Collection of Heads and Horns

BY GIFT.

DAMON, MRS. WILLIAM EMERSON, New York City:
Beisa Antelope (*Oryx beisa*). Horns.

BY PURCHASE.

Cape Buffalo (*Bos caffer*). Skull and Horns.

AT THE AQUARIUM

BY GIFT.

AQUARIUM FISH HATCHERY (MR. L. W. KASZOLKA), Milwaukee, Wis.:
Red-Bellied Dace (15 specimens).

BAUM, MASTER REUBEN, New York City:
Wood Turtle.

BENJAMIN, MASTER GILBERT, Rutherford, N. J.:
Box Turtles (2 specimens), Painted Turtle, Mud Turtle, Muhlenberg
Turtle.

BISHOP, MR. FRED, New York City:
Snapping Turtle.

BROWN, MR. CLIVE, Copake, N. Y.:
Painted Turtles (126 specimens), Mud Turtles (10 specimens), Horn-
wort (5 bushels).

BROWNING, MISS BEATRICE A., Brooklyn, N. Y.:
Painted Turtle.

BUCKBAUM, MR. SAMUEL, Brooklyn, N. Y.:
Soft-Shelled Turtle.

CAMPUS, MR. CESARE C., Brooklyn, N. Y.:

Mexican Turtles (4 specimens), and Soft-Shelled Turtle.

CASLER, MR. ROY, Newark, N. J.:

Alligator (2-foot specimen).

CHASE, MR. FRANK C., New York City:

Wood Turtle.

CONNELL, MISS ROSE H., Brooklyn, N. Y.:

Diamond-Back Terrapin (pair).

DAMON, MRS. WILLIAM E., New York City:

Mahogany cabinet of shells and coral, Tridacna (4 shells), Triton (1 shell), Helmet (4 shells), Fulgar (2 shells), Shells of Wood Tortoise and Radiated Tortoise.

DAVIS, MASTER DONALD O., Brooklyn, N. Y.:

Young Alligator.

DAVIS, MASTER LEWIS MILTON, JR., New York City:

Box Tortoise.

DEACON, MR. FLOYD, New York City:

Young Alligator.

DEMARCE, MR. CHARLES, Brooklyn, N. Y.:

Young Alligators (2 specimens).

DENYSE, MISS LOUISE, Brooklyn, N. Y.:

Sea Horse.

DICKINSON, MISS A. GWENDOLYN, Brooklyn, N. Y.:

Young Alligator.

DIEHL, MR. GEORGE, New York City:

Wood Turtles (3 specimens), Spotted Turtles (2 specimens), Painted Turtle, Box Tortoise.

DONAHUE, MR. R., New York City:

Young Alligator.

DORN, MR. RICHARD, New York City:

Black-Nosed Dace (25 specimens), Black-Banded Sunfish (2 specimens), Common Sunfish, Blue-Gill Sunfish.

DUNN, MR. JOSEPH D., New York City:

Wood Turtle.

DURIEUX, MRS. ARMAND, Brooklyn, N. Y.:

Goldfish.

DURLING, MR. WILLIAM H., Bound Brook, N. J.:

Water Snake.

EPSTEIN, MASTER A., Brooklyn, N. Y.:

Wood Turtle.

FERGUSON, MR. H., New York City:

Orange Filefish.

FITZGERALD, MR. W., Brooklyn, N. Y.:

Young Alligator.

FLORIDA EAST COAST HOTEL Co., New York City:

Mounted Sailfish.

FREEMAN & FREEMAN, New York City:

Young Alligator and Spotted Turtle.

FRICKE, MRS. HENRY J., Broad Channel, Jamaica Bay, N. Y.:

Diamond-Back Terrapin.

GERHARDT, MR. WILLIAM, New York City:

Young Alligators (2 specimens).

GNEIDING, MR. OTTO, Ridgefield Park, N. J.:

Telescope, Moor and Lionhead Goldfishes (9 specimens), Telescope Goldfish Spawn.

- HAGENAH, MASTER HERBERT C., Woodhaven, N. Y.:
Box Tortoise.
- HARDY, MR. WALTER, New York City:
Young Alligator.
- HARR, MR. FRANK, Brooklyn, N. Y.:
Spiny Boxfish.
- HART, MR. JAMES, Jersey City, N. J.:
Orange Filefish.
- HESS, MASTER ROGER, Brooklyn, N. Y.:
Young Alligator.
- HULL, MASTER GEORGE F., New York City:
Common Newts (6 specimens), Snapping Turtle, Painted Turtle.
- JONASSEN, MISS MARIANA, Brooklyn, N. Y.:
Young Crocodile.
- KERSHAW, MR. W. H., New York City:
Young Alligator.
- KISOR, MR. M., New York City:
Wood Turtle.
- KISSEL, MR. HENRY, JR., Cliffside, N. J.:
Toy Hybrid Fishes (2 pairs), *Platyppocilus rubra* (pair).
- KOEHLER, MASTER RICHARD, Stapleton, S. I.:
Young Alligator.
- KOFFER, MR. GEORGE, Brooklyn, N. Y.:
Snapping Turtle.
- KRAFT, MR. R. C., New York City:
Young Alligator.
- MACDANEL, MISS ELSIE A., Rosebank, S. I.:
Cumberland Turtle, Painted Turtle.
- MCLEES, MR. FRANK, Rutherford, N. J.:
Assorted specimens of Water Snakes.
- MEEHAN, MR. WILLIAM E., Supt., on behalf of Fairmount Park Aquarium,
Philadelphia, Pa.:
California Sea Lions (2 specimens).
- MELLEN, MISS IDA M., Brooklyn, N. Y.:
Fantail, Telescope and Common Goldfishes (7 specimens), Mud Minnows (6 specimens), Japanese Snails (6 specimens), Frog Tadpoles (2 specimens).
- MILDENBERG, MR. JOHN, New Brunswick, N. J.:
Young Alligator.
- MOSER, MASTER GEORGE J., JR., Baldwin, N. Y.:
Young Green Turtle.
- MOWBRAY, MR. LOUIS L., Director, Miami Aquarium, Miami, Fla.:
Young Loggerhead Turtles (6 specimens).
- MULLER, MR. K., New York City:
Snapping Turtle.
- NEW YORK STATE CONSERVATION COMMISSION, Albany, N. Y.:
Pike Perch, 14; Sunfish, 11; Black Bass, 13; Muskallunge, 8; Yellow Perch, 8; Brown Trout, 5; Rainbow Trout, 5; Suckers, 3; Burbot, 1; Pickerel, 1; Eel, 1.
(These fishes, received from Lake Chautauqua, Constantia, Sodus Point and Syracuse, were transported at the expense of the Zoological Society.)
- PAGE, MR. JOHN J., New York City:
Soft-Shelled Turtle.

- PALMER, MR. W. P., New York City:
Alligator (2-foot specimen).
- PERKAL, MR. M., New York City:
Spotted Turtle.
- PETERKIN, MR. W. G., Brooklyn, N. Y.:
Snapping Turtle.
- PETERSEN, MR. G. G., New York City:
Young Green Turtles (2 specimens).
- PETERSON, MISS SOPHIE, New York City:
Young Alligator.
- PIATT, MRS. J. W., New York City:
Japanese Salamander.
- PULIS, MASTER SAM, Brooklyn, N. Y.:
Painted Turtles (3 specimens).
- RAULENKRANZ, MR. W., Hoboken, N. J.:
Cumberland Turtles (2 specimens).
- REINA, DR. MARIE COLLETTI, New York City:
Young Alligator.
- RICHARDS, MISS ANNA H., Chatham, N. J.:
Young Alligator.
- SAVARESE, MR. ANTHONY, New York City:
Wood Turtle.
- SCHAARSCHUCH, MASTER ARTHUR, Bergenfield, N. J.:
Snapping Turtle.
- SCOUTEN, MR. WALTER, New York City:
Young Alligator.
- SEGEE, MRS. BERTHA V., Brooklyn, N. Y.:
Young Alligator.
- SHEEHAN, MR. C. N., Brooklyn, N. Y.:
Young Alligator.
- SIMPSON, MR. D. A., New York City:
Young Alligator.
- SISTER VINCENT, New York City:
Cumberland Turtle, Yellow-Bellied Terrapin.
- TRUMAN, MR. G. G., Perrysville, Ohio:
Mud Puppies (2 specimens).
- VAN SICKLE, MR. S. S., Maplewood, Pa.:
Water Snakes (40 specimens).
- WEST, MR. CHARLES E., Jersey City, N. J.:
Young Alligator.
- WESSON, MR. EDWARD G., Montclair, N. J.:
Spotted Turtle (4 specimens).
- WEST, MR. CHAS. E., Jersey City, N. J.:
Young Alligator.
- WESTPHAL, MR. EDWARD, Brooklyn, N. Y.:
Young Alligator.
- WHALEN, MR. GROVER, New York City:
Young Alligator.
- WHITON, MR. HENRY, New York City:
Giant Gars (7 specimens), Short-Nosed Gars (15 specimens).
- WOLF, MRS. G., Brooklyn, N. Y.:
Young Alligator.

PURCHASED BY THE SOCIETY.

Fresh Water.—Florida Alligator, 1; Mud Puppies, 12; Tropical Toy Fishes, 11.

Salt Water, Local.—Specimens purchased from pound nets—see Report of Director, collecting boat.

Salt Water, Tropical.—Green Moray, 2; Queen Angel, 5; French Angel, 4; Black Angel, 76; Blue Angel, 34; Yellow Tail Angel, 1; Cardinal Rockfish, 3; Massachusetts Filefish, 7; Golden Grunt, 1; Yellow Grunt, 1; White Grunt, 43; Blue-Striped Grunt, 6; Schoolmaster, 28; Beau Gregory, 36; Queen Triggerfish, 2; Common Triggerfish, 6; Ocean Triggerfish, 2; Cowfish, 5; Salema, 6; Muttonfish, 2; Rainbow Parrot, 11; Blue Parrot, 9; Large Blue Parrot, 1; Mud Parrot, 2; Unicorn Fish, 1; Porkfish, 173; Blue Tang, 5; Surgeon, 13; Red Hogfish, 16; Spanish Hogfish, 1; Margate, 4; Black Margate, 2; Red Grouper, 5; Black Grouper, 3; Nassau Grouper, 6; Jewfish, 2; Gray Snapper, 3; Spot Snapper, 11; Dog Snapper, 1; Butterflyfish, 5; Graysby, 4; Neverbite, 2; Bermuda Chub, 12; Spadefish, 3; Rock Hind, 1; Red Hind, 3; Sandfish, 30; Sargeant Major, 10; Yellow Tail, 11; Nurse Shark, 1; Shark Sucker, 2; Catfish, 2; Porgy, 2; Scorpion-fish, 1; Tom Tate, 2; Pigfish, 1; Stone Crab, 1; Box Crab, 2; Tulip Conch, 2; Rock Crab, 5; Red Hermit Crab, 7.

SPECIMENS RECEIVED BY EXCHANGE.

DETROIT AQUARIUM, Belle Isle, Detroit, Mich.:

Mudfish, 25; Darters, 21; Rock Bass, 12; Goldfish, 12; Bullheads, 16; Fresh-water Drum, 10; Small-mouthed Bass, 11; Red-horse Sucker, 6; Long-nosed Gar, 6; Pike, 6; Blue Catfish, 4; Stone Catfish, 4; Common Sucker, 2; Carp, 2; Sunfish, 2; Quillback, 1; Muskallunge, 1; Mud Puppy, 5; Snapping Turtle, 3; Yellow-bellied Terapin, 2.

FAIRMOUNT PARK AQUARIUM, Philadelphia, Pa.:

Calico Bass, 21.

NEW JERSEY FISH AND GAME COMMISSION, Trenton, N. J.:

Yellow Perch, 250; Sunfish, 125; Brook Trout, 69; Chub Suckers, 7; Common Suckers, 6; Catfish, 5; Black Bass, 3; Common Roach, 1.

COLLECTED BY EMPLOYEES.

Fresh Water.—Pearl Roach, 2,948; Goldfish, 30; Carp, 1; Crayfish, 536; Potomac Snails, 500.

Salt Water.—Brown Anemones, 2,000; Soft-shell clams, 600; Killifishes, 300; Starfish, 125; Shrimps, 100; Sheepshead Minnows, 4.

Specimens taken with seines, see Report of Director, collecting boat.

FISH EGGS DONATED FOR THE HATCHERY—2,743,000.

By U. S. BUREAU OF FISHERIES, Washington, D. C.:

5,000 Landlocked Salmon (From Maine).
10,000 Black Spotted Trout (From Montana).
18,000 Rainbow Trout (From Virginia).
500,000 Pike Perch (From Vermont).

By N. Y. CONSERVATION COMMISSION, Albany, N. Y.:

10,000 Lake Trout.
700,000 Whitefish.
1,500,000 Lake Herring.

The fry were distributed to the States of New York and New Jersey.

The Aquarium Library

BY GIFT.

- BIGELOW, DR. EDWARD F., Sound Beach, Conn.:
The Guide to Nature.
- BROOKLYN INSTITUTE OF ARTS AND SCIENCES, Brooklyn, N. Y.:
Annual Report, Museum News and Quarterly.
- CALIFORNIA ACADEMY OF SCIENCE, San Francisco, Cal.:
Proceedings.
- CHILDREN'S MUSEUM, Brooklyn, N. Y.:
Bulletin for 1920.
- JENNINGS, MR. G. E., New York City:
Fishing Gazette.
- LIVERPOOL MARINE BIOLOGICAL COMMITTEE, Liverpool, Eng.:
Annual Report, Marine Biological Station at Port Erin (through Prof W. A. Herdman, Director).
- MINNESOTA STATE GAME AND FISH DEPARTMENT, St. Paul, Minn.:
Fins, Feathers and Fur.
- POYSER, MR. W. A., Philadelphia, Pa.:
Aquatic Life.
- SMITHSONIAN INSTITUTION, Washington, D. C.:
Special papers.
- U. S. BUREAU OF FISHERIES, Washington, D. C.:
Reports, Bulletins and Circulars.
- U. S. NATIONAL MUSEUM, Washington, D. C.:
Proceedings, Vols. 55, 56 (1920).
Annual Report, 1919.
- WORLD BOOK COMPANY, Yonkers, N. Y.:
Cockerell's Zoology.

BY PURCHASE.

New York Reptiles and Batrachians, by ECKEL and PAULMIER.

CHARTER
OF THE
NEW YORK ZOOLOGICAL SOCIETY

CHAPTER 435, LAWS OF 1895.

AN ACT to incorporate the New York Zoological Society and to provide for the establishment of a zoological garden in the city of New York.

As amended by Chapter 146 of the Laws of 1902; and by Chapter 240 of the Laws of 1910.

See Chapter 432 of the Laws of 1900.

See Chapter of the city of New York, Section 626 of the Laws of 1901.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Charles A. Dana, Oswald Ottendorfer, Andrew H. Green, William H. Webb, Henry H. Cook, Samuel D. Babcock, Charles R. Miller, George G. Haven, J. Hampden Robb, Frederick W. DeVoe, J. Seaver Page, Rush C. Hawkins, David James King, Wager Swayne, Charles A. Peabody, Jr., Charles E. Whitehead, Charles R. Flint, Samuel Parsons, Jr., Mornay Williams, Henry E. Gregory, Isaac W. Maclay, Isaac Rosenwald, Hugh N. Camp, Andrew D. Parker, Cornelius Van Cott, William F. Havemeyer, Frederick Shonnard, William W. Thompson, Alexander Hadden, Edward L. Owen, John H. Starin, Rush S. Huidekoper, William W. Goodrich, Albert H. Gallatin, Frederick S. Church, Edward C. Spitzka, Robert L. Niles, Madison Grant, C. Grant La Farge, William Van Valkenburg, and such other persons as may, under the provisions of its by-laws, become members of the corporation hereby created, are hereby created a body corporate and politic, by and under the name of New York Zoological Society.

SEC. 2. Said corporation shall have power to establish, maintain and control zoological parks, gardens, or other collections for the promotion of zoology and kindred subjects, and for the instruction and recreation of the people. Said corporation may collect, hold, and expend funds for zoological research and publication, for the protection of wild animal life, and for kindred purposes, and may promote, form, and co-operate with other associations with similar purposes, and may purchase, sell, or exchange animals, plants, and specimens appropriate to the objects for which it was created.

SEC. 3. The managers of said corporation shall have power to make and adopt by-laws for the management and government of its affairs and business, for the admission, suspension, and expulsion of its members, and for the terms and conditions of membership; to prescribe the number and mode of election of its officers; to define their duties; to provide for the safe-keeping of its property. and from time to time to alter and modify its By-laws.

SEC. 4. The affairs and business of said corporation shall be managed and controlled by a board of managers, the number of whom shall be prescribed by the by-laws. The first board of managers shall be divided by lot into three classes, equal in number, one of which classes shall hold office for one year, another for two years, and the other for three years; and all persons elected to be managers at any subsequent election shall hold office for three years, and until others are elected in their stead. There shall be a president, two vice-presidents, treasurer and secretary, to be elected by the board of managers annually, who shall hold office until others are elected in their stead. The first meeting under this act may be held at any time upon a notice of five days, signed by any five of the incorporators named in the first section of this act, fixing a time and place for such meeting, a copy whereof shall be mailed to each of said incorporators at his usual post-office address, and twelve of such incorporators shall be a quorum for the purpose of organization, adoption of by-laws, and election of officers. No manager of said corporation shall be interested, directly or indirectly, in any contract concerning its property or affairs.

SEC. 5. Said corporation may raise money by the issue of bonds, secured by a mortgage on any or all of its property not acquired from said city or state.

SEC. 6. Said corporation may take, purchase, and hold real and personal estate necessary for the purpose of its incorporation, and shall possess the general powers and be subject to the restrictions and liabilities prescribed in Article II of Chapter 23 of the Consolidated Laws, entitled "General Corporation Law," being chapter 28 of the Laws of 1909.

SEC. 7. The commissioners of the sinking fund of the said city are authorized in their discretion to allot, set apart, and appropriate for the use of said corporation, any of the lands belonging to said city north of One Hundred and Fifty-fifth Street, but not in the Central Park, and such appropriation may be revoked if, after the expiration of five years from the passage of the act, a zoological garden is not established thereon; said grounds thus set apart and appropriated shall be used or no purpose whatsoever except those aforesaid. As soon as any lands are set apart the Mayor of the said city of New York, and the President of the Department of Parks of said city, shall become and be *ex-officio* members of the board of managers of said corporation. If at any time the animals now composing the menagerie of Central Park shall be removed therefrom by the authorities having charge thereof, said authorities may make an arrangement with the incorporators named in this act or the corporation formed by them for leasing or sale of such animals to such incorporators or corporation, and said incorporators or corporation shall have a preference over any other person or corporation in respect thereto upon the same terms which said authorities could make with any such other person or corporation, or upon such other terms as to such authorities may seem proper, but nothing herein provided shall be construed as giving the commissioners of the Department of Public Parks authority to sell, lease, transfer, or in any other wise dispose of said animals or other property connected with or belonging to said menagerie.

SEC. 8. Admission to the said gardens shall be free to the public for at least four days, one of which shall be Sunday, in each week, subject to such rules and regulations as shall be prescribed by said corporation.

SEC. 9. This act shall take effect immediately.

AN ACT to amend chapter four hundred and thirty-five of the laws of eighteen hundred and ninety-five, entitled "An act to incorporate the New York Zoological Society and to provide for the establishment of a zoological garden in the City of New York" in relation to real and other property.

Became a law May 26, 1917, with the approval of the Governor. Passed, three-fifths being present.

ACCEPTED BY THE CITY.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Chapter four hundred and thirty-five of the laws of eighteen hundred and ninety-five, entitled "An act to incorporate the New York Zoological Society and to provide for the establishment of a zoological garden in the City of New York," as amended by chapter two hundred and forty of the laws of nineteen hundred and ten, is hereby further amended by adding thereto a new section to read as follows:

7-a. The board of estimate and apportionment in the City of New York may, in its discretion, set apart and appropriate upon such conditions as it may deem expedient for the extension and development of the work and objects of the said New York Zoological Society, the whole or any part of that portion of Bronx Park in the City of New York, lying to the south of Pelham avenue and Pelham parkway, for the use of the said New York Zoological Society, the said lands so to be appropriated to be described particularly in the order of the board of estimate and apportionment hereby authorized. The said board of estimate and apportionment may also, in its discretion at the time of setting apart and appropriating said lands or any part thereof to the New York Zoological Society, and annually thereafter, in addition to any sum or sums which it may have appropriated for the support and maintenance of the New York Zoological Park, appropriate to the use of said society, such sum or sums in its discretion for the care and maintenance of the additional lands that may be allotted to the said society under the authority hereby conferred, as it may deem best.

2. This act shall take effect immediately.

NEW YORK ZOOLOGICAL SOCIETY

AND THE

NEW YORK AQUARIUM

CHAPTER 441, LAWS OF 1902.

AN ACT to authorize a further appropriation to the New York Zoological Society for the support of the New York Aquarium.

As amended by Chapter 239 of the Laws of 1910.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Chapter four hundred and forty-one of the laws of nineteen hundred and two, entitled "An Act to authorize a further appropriation to the New York Zoological Society for the support of the New York Aquarium," is hereby amended to read as follows:

SECTION 1. The Board of Estimate and Apportionment of the City of New York may annually, in its discretion, include in the budget for the then next ensuing financial year, in addition to any sum or sums which may be appropriated for the adequate support and maintenance of the New York Zoological Park or gardens, situated in the borough of the Bronx, and administered and controlled by the New York Zoological Society, a further sum or sums, in its discretion, for the use of the said New York Zoological Society, provided, however, that the additional appropriation hereby authorized shall be made only in case an agreement is entered into between the said New York Zoological Society and the City of New York, acting by its Board of Estimate and Apportionment for the adequate keeping, maintenance, extension, preservation and exhibition of the building and approaches thereto and collection of aquatic animals and plants contained therein, known as the New York Aquarium, situated in the Battery Park in the Borough of Manhattan in said city, and also for furnishing opportunities for study, research and publication in connection with said collections, which contract the said Board of Estimate and Apportionment is hereby expressly authorized, in its discretion, to make upon such terms and conditions as may be agreed upon with the said New York Zoological Society, and which contract shall also provide how the duty of the commissioner of parks for the borough of Manhattan and Richmond in respect to maintaining the said aquarium now imposed upon him by law shall be performed.

SEC. 2. This act shall take effect immediately.

BY-LAWS
OF THE
NEW YORK ZOOLOGICAL SOCIETY

AMENDED TO JANUARY 18, 1921.

ARTICLE I.

MEETINGS OF THE SOCIETY.

SECTION 1. The office and place of business of the New York Zoological Society shall be in the City of New York, unless otherwise ordered.

SEC. 2. The Society shall hold its annual meeting for the election of Managers, and other business, on the second Tuesday of January, or such day thereafter during the month of January to which said annual meeting shall adjourn.

SEC. 3. Special meetings of the Society shall be called by the Secretary, upon the request of the President or the Chairman of the Executive Committee, or at the written request of ten members.

SEC. 4. Notices of all meetings shall be mailed to each member of the Society at least three days before such meeting.

SEC. 5. At meetings of the Society twenty members shall constitute a quorum.

SEC. 6. The order of business shall be as follows:

1. Roll Call.
2. Reading of minutes not previously read.
3. Report of Executive Committee.
4. Report of Secretary.
5. Report of Treasurer.
6. Report of the Director of the Zoological Park.
7. Report of Director of the Aquarium.
8. Election of Managers.
9. Communications.
10. Miscellaneous business.
11. Reports and resolutions.

ARTICLE II.

BOARD OF MANAGERS.

SEC. 1. The Board of Managers shall consist of thirty-six members, together with the Mayor of New York and President of the Park Board, or Commissioner for the Bronx, who shall be members *ex-officio* of the Board.

SEC. 2. Nineteen Managers shall constitute a quorum, but ten Managers may transact current business, and adjourn, subject to the subsequent approval of a meeting at which a quorum shall be present.

SEC. 3. The Board of Managers shall hold an annual meeting on the third Tuesday of January, or on such day thereafter to which said annual meeting shall adjourn. Regular meetings of the Board may also be called by the Secretary on the third Tuesdays of October and April upon the request of the President or Chairman of the Executive Committee. Special meetings of the Board shall be called at any time by the Secretary upon the request of the President or Chairman of the Executive Committee, or at the written request of five managers.

SEC. 4. Notices of meetings of the board shall be mailed to each Manager at least three days before such meetings.

SEC. 5. The successors to the outgoing class of Managers shall be elected by the Society at its annual meeting, but vacancies in the board may be filled for the unexpired term by the Board of Managers, or by the Executive Committee.

SEC. 6. A Nominating Committee shall be annually appointed by the Executive Committee, and shall consist of three members of the Society at large, who shall nominate and post ten days before the annual election the names of twelve persons to succeed the outgoing class of Managers in a conspicuous place in the office of the Society.

SEC. 7. No person shall be eligible for the election of the Board of Managers except to fill vacancies, unless his name shall have been posted as a candidate by such committee, or by not less than ten members, in writing, in a conspicuous place in the office of the Society ten days before the annual election. All candidates for election as Managers must be Life Members, Patrons, Associate Founders, or Founders of the Society.

SEC. 8. Any Manager who shall fail to attend three consecutive meetings of the Board, unless excused by a vote of the Board, shall cease to be a Manager.

SEC. 9. The Board of Managers shall at its annual meeting elect a President, two Vice-Presidents, a Secretary, and Treasurer, who shall hold office for one year, or until their successors are elected. The President, Vice-Presidents, and Treasurer shall be members of the Board.

SEC. 10. The Director of the Zoological Park, the Director of the Aquarium, and all other persons employed by the Society, shall be appointed by the Board or by the Executive Committee, and shall hold office during the pleasure of the Board.

SEC. 11. The Board shall, at its annual meeting, elect an Executive Committee and Auditing Committee, which shall hold office for one year, or until their successors are elected. The Board of Managers and the Executive Committee shall also have authority to appoint such other Committees or officers as they may at any time deem advisable and to delegate to them such powers as may be necessary.

SEC. 12. The order of business of the meetings of the Board shall be as follows:

1. Roll Call.
2. Reading of minutes not previously read.
3. Report of Executive Committee.
4. Report of Secretary.
5. Report of Treasurer.

6. Report of Auditing Committee.
7. Report of Director of Zoological Park.
8. Report of the Director of the Aquarium.
9. Election of Officers.
10. Election of Committees.
11. Election of new members.
12. Communications.
13. Miscellaneous business.

SEC. 13. All reports and resolutions shall be in writing, and the ayes and nays may be called on any resolution at the request of one Manager.

SEC. 14. Whenever the funds of the Society shall permit, the Board of Managers or the Executive Committee may award medals or other prizes for meritorious work connected with the objects of the Society.

ARTICLE III.

OFFICERS.

SEC. 1. The officers of the Society shall consist of a President, two Vice-Presidents, a Treasurer, a Secretary, and a Director of the Zoological Park. These officers, with the exception of the Director, shall be elected at the annual meeting of the Board of Managers, but any vacancy may be filled for an unexpired term by the Board of Managers, or by the Executive Committee, until the next annual election.

SEC. 2. The President shall preside at all meetings of the Board and of the Society, and shall be *ex-officio* a member of the Executive and Auditing Committees.

SEC. 3. The Vice-Presidents shall, in the absence of the President, perform his duties and possess his powers, acting in the order of their election.

SEC. 4. The Treasurer shall receive, collect and hold, subject to the order of the Board of Managers, or the Executive Committee, all dues, subscriptions, warrants from the City, fees and securities. He shall pay all bills as ordered by the Board of Managers or the Executive Committee, and shall report to the Society at its annual meeting, and to the Board of Managers at all regular meetings, and to the Executive Committee at each meeting. He shall keep all moneys and securities in some bank or trust company to be approved by the Board of Managers or Executive Committee. The books of the Society shall at all times be open to the inspection of the Managers.

SEC. 5. The Secretary shall be a salaried officer of the Society. He shall be present, unless otherwise relieved by the Board or Executive Committee, at all meetings of the Society, of the Board and of the Standing Committees. He shall keep a careful record of all proceedings, shall have the custody of the seal, archives and books, other than books of account, and shall conduct the correspondence of the Society. He shall issue all notices and tickets, and shall perform such other duties as the Board may direct. He shall be a member *ex-officio* of the Executive, Aquarium, and Auditing Committees, and of the Scientific Council.

SEC. 6. The Director of the Zoological Park shall be elected annually by the Executive Committee at a salary to be determined by said Committee, and shall hold office until removed or his successor chosen by said Committee. He shall

be the responsible administrative officer of the Park, and shall recommend to the Executive Committee candidates for the various positions in the Park. He shall also perform all such other duties in connection with the business, scientific, and literary administration of the Society as may be assigned to him by the Executive Committee.

SEC. 7. The Director of the Aquarium shall be elected annually by the Executive Committee, and shall hold office until removed or his successor is chosen by said Committee. He shall be the responsible administrative officer of the Aquarium, and shall recommend to the Executive Committee all candidates for positions in the Aquarium. The director of the Aquarium shall be *ex-officio* a member and Chairman of the Aquarium Committee. He shall perform such other duties in connection with the Aquarium as may be assigned to him by the Executive Committee.

ARTICLE IV.

COMMITTEES.

SEC. 1. There shall be two standing committees, the Executive Committee and the Auditing Committee, which shall hold office for one year or until their successors are elected.

SEC. 2.—The Executive Committee shall consist of eight Managers, together with the President, Secretary and Treasurer of the Society *ex-officio*. Four members including the Chairman shall constitute a quorum, and all meetings shall be called by the Chairman. The Executive Committee shall fill all vacancies in its own number and shall have the full power of the Board of Managers, except so far as such delegation of power may be contrary to law.

SEC. 3. The Executive Committee shall have the control and regulation of the collections, library, and all other property of the Society, and shall have power to purchase, sell, and exchange specimens and books, to employ and control all officials and employees of the Society, Park, and Aquarium, and generally to carry out in detail the directions of the Board of Managers and the terms of any contract between the City, or Park Board, and the Society.

SEC. 4. All the rules and regulations for the examination of applicants for the various positions in the Park and Aquarium shall be made or approved by the Executive Committee.

SEC. 5. The Executive Committee may regulate the auditing and payment for all current accounts.

SEC. 6. The Executive Committee shall annually appoint an Aquarium Committee, whose duties and powers are set forth in Section II of Article IV of these By-Laws.

SEC. 7. The Executive Committee shall annually appoint a Nominating Committee, whose duties and powers are set forth in Sections 6 and 7, Article II, of these By-Laws.

SEC. 8. It shall also appoint a Scientific Council, whose powers and duties are set forth in Section 2 of Article V of these By-Laws.

SEC. 9. The Committee shall make a written report at each regular meeting of the Board of Managers.

SEC. 10. The Auditing Committee shall consist of three regular members of the Society, in addition to the President and Secretary, members *ex-officio*, and vacancies shall be filled by the Executive Committee. It shall be the duty of

the Auditing Committee to audit, annually, the accounts of the Treasurer, of the Director of the Zoological Park, and of the Director of the Aquarium, and any other accounts of the Society, and shall report to the Board of Managers at its annual meeting.

SEC. 11. The Executive Committee shall annually appoint an Aquarium Committee, not to exceed eight members of this Society, who shall hold office until their successors are chosen. All vacancies shall be filled by the Executive Committee. The Director of the Aquarium shall be *ex-officio* a member and the Chairman of the Aquarium Committee, and such Committee may vest in him any or all of its powers. The Chairman of the Executive Committee and the Secretary of the Society shall also be *ex-officio* members of the Aquarium Committee. Three members shall constitute a quorum. The Executive Committee may delegate to the Aquarium Committee such powers as it may deem proper.

ARTICLE V.

SCIENTIFIC COUNCIL.

SEC. 1. The Executive Committee shall annually appoint a Scientific Council of not more than ten members, and shall fill all vacancies. Members of the Council shall hold office until their successors are appointed.

SEC. 2. The duties of the Council shall be to act as an advisory board in all matters pertaining to the scientific administration of the Society, and especially as to the scientific features of the Park, the promotion of zoology by publications and otherwise, and the preservation of the native fauna of America.

SEC. 3. Four members, including the Chairman, shall constitute a quorum. The Chairman shall be elected annually by the Council. The Chairman of the Executive Committee and the Secretary of the Society shall be members *ex-officio* of the Council.

ARTICLE VI.

MEMBERS.

SEC. 1. The present members and such others as shall become associated with them, under the conditions prescribed by the By-Laws, shall be members of this Society as long as they shall comply with the By-Laws.

SEC. 2. Members failing to comply with these By-Laws, or for other good and sufficient cause, may be expelled from the Society by the Executive Committee.

SEC. 3. Candidates for membership shall be proposed and seconded by members of the Society. The name, occupation, and place of residence of every member as proposed shall be submitted for election to the Board of Managers or the Executive Committee, and such person, when elected, shall become a member upon payment of the annual dues, or of the fees as prescribed below.

SEC. 4. There shall be a class known as Fellows, which shall consist of members of the Society who have rendered marked services to science, and shall be chosen by the Executive Committee. The privileges of Fellows shall be in all respects the same as those of regular members of the Society, but they shall be exempt from the payment of annual dues.

SEC. 5. The annual dues shall be ten dollars, payable in advance, on the first day of May of each year, but the Executive Committee may remit the dues

for the current year in the case of members elected between January 1st and May 1st of each year. The classes of membership shall be as follows:

SEC. 6. The payment of \$200 at one time shall constitute any member a Life Member.

A member who has paid annual dues for a period of five years may thereafter, at any time, upon the payment of the difference between the amount of dues already paid and \$200, become a Life Member, but such payment shall be not less than \$100.

SEC. 7. The payment of \$1,000 at one time, or in the case of a Life Member, of \$800, shall constitute any member a Patron.

SEC. 8. The payment of \$2,500 at one time, or in the case of a Patron of \$1,500, or of a Life Member of \$2,300, shall constitute any member an Associate Founder.

SEC. 9. Any member who shall donate to the Society \$5,000, or property of equal value, or any Associate Founder who shall donate \$2,500, or any Patron who shall donate \$1,000, may be elected by the Board of Managers or Executive Committee a Founder.

SEC. 10. Any member who shall have donated to the Society ten thousand dollars (\$10,000), or its equivalent, may be elected by the Board of Managers or the Executive Committee a Founder in Perpetuity. Such Founder in Perpetuity shall have the power to designate by a last will and testament his successor, who shall thereupon be entitled to all the rights and privileges of the original Founder in Perpetuity, including the right of designating in turn his successor.

SEC. 11. Any member who shall have donated to the Society \$25,000, or its equivalent, may be elected by the Board of Managers, or the Executive Committee, a Benefactor. Benefactors shall have the rights and privileges of a Founder in Perpetuity.

SEC. 12. Persons who have rendered marked service in the science of zoology or natural history may be elected Honorary Members, but not more than three such Honorary Members shall be elected in any one calendar year.

SEC. 13. A resident member who shall have rendered marked scientific or professional services to the Society in any branch of its work may be elected by the Executive Committee a Life Member, Patron, Associate Founder, or Founder. A resident of New York who shall have rendered marked service in zoology or natural history may be elected by the Executive Committee a Permanent Fellow.

SEC. 14. Non-residents who communicate valuable information to the Society, or who have rendered marked service in the science of zoology or natural history, may be elected Corresponding Members.

SEC. 15. Benefactors, Founders in Perpetuity, Founders, Associate Founders, Patrons, Life Members, Honorary Members, Permanent Fellows, Fellows, and Corresponding Members shall be exempt from annual dues.

ARTICLE VII.

PRIVILEGES OF MEMBERS.

SEC. 1. A member's ticket admits the member and his immediate family to the Park on reserve days, and to all lectures and special exhibitions, and may be used by the member's immediate family, and shall be good for the current year.

SEC. 2. Admission tickets to the Park and Aquarium on reserve days are issued to members for distribution, and are good for the current year.

SEC. 3. Each member of the Society is entitled annually to a member's ticket and to ten admission tickets.

SEC. 4. Each member shall also receive one copy of the catalogue or handbook, the report and official publication of the Society, and shall have all the privileges of the Library and Members' Building.

SEC. 5. No member shall be entitled to the privileges enumerated in this Article unless his annual dues shall have been paid.

SEC. 6. The Life Members shall have all the privileges of members and ten additional admission tickets.

SEC. 7. Benefactors, Founders in Perpetuity, Founders, Associate Founders and Patrons shall have all the privileges of Life Members, and shall in addition receive copies of all scientific works published by the Society.

SEC. 8. Any member who shall fail to pay his annual dues within three months after the same shall have become due, and after notice of thirty days, by mail, shall cease to be a member of the Society; subject, however, to reinstatement by the Board of Managers or Executive Committee for good cause shown.

SEC. 9. Any person elected to membership who shall fail to qualify within three months after notice of his election shall be considered to have declined his election; but such term may be extended by the Board of Managers, or Executive Committee.

ARTICLE VIII.

FINANCES.

SEC. 1. The fiscal year of the corporation shall be the calendar year commencing January 1st and ending December 31st.

SEC. 2. Neither the Society nor any of its Managers or Officers shall contract any debt which, with existing debts, shall exceed in amount the funds then in the Treasury, except to meet expenditures for which the City is liable, and for which the Society will be reimbursed by warrants from the Comptroller's office.

ARTICLE IX.

AMENDMENTS.

SEC. 1. Amendments to these By-Laws may be proposed, in writing, at any meeting of the Board of Managers, and adopted by unanimous consent of the Managers present, or if such proposed amendment shall fail to receive unanimous consent, the Secretary shall, with the notices of the next meeting, send a copy of it to each Manager and state that it will be brought up for action at such meeting, when it may be passed by a majority vote.



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